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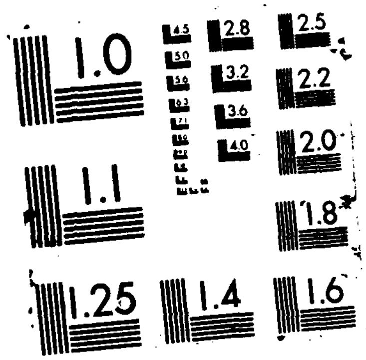
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ABSTRACT

Sufficient oxygen is required to pass through a hydrogel contact lens for proper corneal metabolism. The permeability of oxygen through such a lens is determined by its specific water content. Thus, it follows that if a hydrogel lens has a decrease in water content there will be a proportional decrease in the amount of oxygen available to the cornea through that lens. Changes in the water content of a lens also affect other important lens parameters. This study addressed the change in water content of three lens types: a low water content, CSI-T lens, (n=20); a medium water content, Hydrocurve II lens, (n=25); and a high water content, Permaflex lens, (n=14). Although studies of lens water content have been done before, none have followed the same lens wearers for an extended period of time while the lenses were being measured with a hand refractometer. This apparatus has been shown to be reliable, accurate, and non-lens damaging. Water content was measured at ten specific intervals from before lens wear to Day 180. Analysis of the data demonstrated that all three lens types showed a statistically significant decrease in water content. After the 30 minute measurement interval, however, the percent change in water content was very slight. Although there were a few statistically significant points after the 30 minute point, none were deemed to be of clinical relevance.

Key words: hydrogel contact lens, soft contacvt lens, oxygen permeability, oxygen transmissibility, lens water content, hand refractometer

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A LONG TERM STUDY OF THE WATER CONTENT CHANGES IN THREE TYPES OF HYDROGEL CONTACT LENSES

A Thesis Presented to
the Faculty of the Graduate School of
Pacific University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science in Clinical Optometry
(Management Track)

by
L. Greg Luehrs, O.D.
May 1987

A LONG TERM STUDY OF THE WATER CONTENT CHANGES

IN THREE TYPES OF DYHDORGEL CONTACT LENSES

Place: Pacific University, College of Optometry, Forest Grove, Oregon.

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DISCLAIMER

The views and conclusions in this thesis are those of the author and do not necessarily reflect the official position or opinion of the Department of the Air Force, Department of Defense, or the United States Government.

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INTRODUCTION

The water content of a hydrogel contact lens plays a significant role in the transport of oxygen through such a lens to the cornea. Sarver was one of the first to note that a decrease in water content of a hydrogel lens could significantly reduce the oxygen transmissibility capabilities of the lens.[1] Eye care professionals are well aware of the ramifications of a reduction of oxygen to the cornea. A less than significant amount of corneal oxygen can lead to such problems as edema, epithelial defects, and neovascularization. Thus, the water content of a hydrogel lens must be viewed as a critical lens parameter.

To measure water content, investigators have generally used one of two methods.[2] One, the weight method involves a balance which is used to weigh the wet and dry state of a contact lens. The water content for the hydrogel is then determined according to the equation:

$$\text{water content \%} = \frac{\text{wet weight - dry weight}}{\text{wet weight}} \times 100$$

Two major disadvantages of this method make it impractical for clinical use and long term studies. First, is the expense of an accurate balance. Secondly, because of the desiccation process for the dry weight measurement, the lens is rendered useless for further wear.

The hand refractometer provides a second means of determining water content of a soft lens. It is relatively inexpensive, and it is practical for clinic and office use. The hand refractometer is accurate, easy to use, quick, and non-lens damaging so it is an obvious choice for a long term study.

Most of the research done with the hand refractometer to date has been fairly short term and limited in scope. For instance, some investigators have merely compared the lens manufacturer's listed water content to the refractometer findings.[3] While others have followed lens water content changes through just

the first seven hours of wear.[4]

The primary function of this long term study was to determine if significant changes in the water content occurred in three types of hydrogel lenses because of patient wear. This investigation was designed to provide additional information by extending the assessment time to a longer duration and increasing the number of subjects to a statistically relevant size. These two dimensions of the study are expected to generate data which was not previously obtained in studies of this nature.

For the past few years the United States Air Force (USAF) has been conducting studies to determine the feasability of aircrew members wearing hydrogel lenses while performing flying duties.[5-9] It has long been an Air Force policy to prohibit flying members from wearing contact lenses either on or off the job.[10] This regulation was written during the early days of PMMA lenses to avoid problems common to them, such as spectacle blur, excessive corneal edema and clouding, and easily lost lenses. As one might imagine, any one of these problems present in an aircrew member would pose a serious threat to adequate job performance. Most of these serious problems are now avoided with hydrogel lenses. It is a hope that the results of this investigation will provide some impact on the decisions the USAF makes concerning the wearing of contact lenses by flying personnel.

HYPOTHESIS

This study considered changes in hydrogel lens water content which were assumed to take place during patient wear. Lenses were measured by a hand refractometer prior to dispensing and at specified intervals over a six month period. Subjects wore one of three lens types, each of different material and water content (low, medium, high).

The specific hypothesis investigated for this study was:

Would subject wear cause significant changes in the water content values in each of the three types of hydrogel lenses researched?

There were four secondary questions pertaining to water content that were of interest.

*1: If significant changes were observed, could the results from this study compare favorably to results of previously published studies?

*2: If the changes in water content values were significant, could the amount of change be predicted at any point within the 180 day period encompassed by this study?

*3: If significant changes in water content occurred, could they be directly related to cumulative hours of lens wear, number of enzyme cleanings, or both?

*4: If significant changes in water content occurred, would there be corresponding changes in visual acuity, keratometric readings, and post-lens removal refractions?

Appropriate statistical analysis of the data would be used to determine the significance of any change in hydrogel lens water content. A statistically sound subject group sample size, and long term testing period would provide additional data and avoid some of the serious limitations of past research.

REVIEW OF THE LITERATURE

The clear, avascular tissue known as the cornea is one of the most important elements of sight. The significance of the cornea is that it (with the tear film) provides the bulk of the refracting power of the eye.[11] To maintain its relative transparency, the cornea must sustain a state of hydration that is dependent upon sufficient oxygen, normal osmolarity of the precorneal film, and freedom from mechanical or chemical irritation.[12]

It is felt that the oxygen supply to the various corneal layers comes from different sources. Larke states that the oxygen flow to the stroma is from both the aqueous and the atmosphere, while the edothelium is dependent upon an aqueous oxygen supply, and the epithelium is dependent upon atmospheric respiration.[13] To further help maintain its complicated metabolic system, there is a given osmotic equilibrium established between the cornea and the precorneal fluid.[12]

The metabolic system of the cornea is truly amazing and intricate as it performs its task of preserving transparency. This system is easily interrupted when a barrier, such as a contact lens, is placed on the eye. Not only will the lens application probably change the osmolarity of the precorneal film, but it will reduce the amount of atmospheric oxygen to the cornea. Ruben wrote that the contact lens disturbs the normal metabolism of the cornea.[14] The hydrogel lens fitter, manufacturer, and researcher all want a lens that, when placed on the eye, will interfere the least with corneal metabolism.

The emphasis on an optimum contact lens design is ongoing. Refojo discusses the persistent drive that is being made to provide hydrogels with improved optical properties, comfort, and to be physiologically acceptable.[15] Brennan commented that because of the numerous changes in corneal structure

which can result from contact lens hypoxia, there has been an increasing emphasis upon lens parameters so that corneal oxygen availability during lens wear can be optimized.[16] The point is, with decreased oxygen available to the cornea a number of problems such as edema, corneal epithelial staining, neovascularization, striae, and infiltrates will occur.[12,13,17-19]

Oxygen transmissibility has been a topic of much interest in the contact lens field in recent years. Since this study deals only with hydrogels, further comments in this report refer to these lens types. Fatt feels that, from a physiological point of view, the oxygen transmissibility of a soft contact lens material is the most important physiochemical property.[20] The amount of oxygen through a hydrogel is governed by one of the scientific gas laws. Miller and White[12] and, Fatt and Cheston[16] have described how Fick's Law of Diffusion forms the basis of oxygen permeability (Dk) and oxygen transmissibility (Dk/L).

The molecular composition of a hydrogel is very important in oxygen transmissibility. Hydrogels are copolymers of plastics that absorb water, swell in volume and then take on the physical characteristics of a gel. The hydrated plastic is the sum of the permanent polymer crosslinked network, comprising the solid component, and a variable aqueous component.[21] It is the aqueous state of the hydrogel with which this study is concerned.

The water content of a hydrogel lens plays a significant role. The important steady-state movement of oxygen to the cornea through the lens is governed by the product of the oxygen diffusion coefficient, oxygen solubility and, lens thickness. This product, termed oxygen transmissibility (Dk/L) appears to vary directly with hydration. Hydration is defined as the grams of water per gram of dry material in a gel.[20] Ruben stated that the permeability of oxygen

in hydrogel lenses is determined by their specific water content.[22] Sarver[1] showed the linear relationship between water content and the oxygen permeability of the material. From this it was suggested that a decrease in the water content of a hydrogel lens could significantly reduce the ability of the lens to transmit oxygen.

Hill and Andrasko,[23] in a study of the effects of water loss from hydrophilic lenses, found that as the amount of water in the lens decreased, the oxygen transmissibility decreased. In another article Hill and Brezinski[24] make the statement that water is the primary pathway for oxygen through hydrophilic lenses.

Although the laws that govern oxygen transmission through a lens remain constant, the specific water content of a lens does not. There are a number of factors that effect the hydration of soft lenses. Prominent researchers have devoted much investigational time to the study of hydrogel lens dehydration.[25] Factors that can effect lens hydration include: temperature,[4,26] humidity,[4,27] tear pH and tear osmolarity,[4] hypotonic and hypertonic solutions,[28] lens thickness,[22,29] placing the lens on the eye,[1,4,30] and, eyelid position and blink rate.[31]

When there is a change in lens hydration there are a number of lens parameters and characteristics that vary as well. These lens changes include: contact lens diameter,[15,32] radius of curvature,[15,21,32-34] power,[32] other dimensional parameters,[35] and, physical fit.[21,33,34,36]

Investigator's have not only found that a number of factors have an effect on the water content of hydrogel lenses, but that there is a measurable difference in water content depending upon whether that lens is measured just after removal from the vial or just after it is removed from the eye.[13,35,37-39] The three

most frequently mentioned reasons for this decrease in water content from vial to eye are changes in temperature, pH, and humidity.

There are two methods of measuring the water content of hydrogels. In 1976 Hill and Linder[40] described the procedures of wet and dry state weight measurement method. In 1983 Snyder and Koers discussed that same method and included descriptions of variations that occur when using different blotting techniques.[41] The disadvantages of the weight methods include: expensive instrumentation that is impractical for in-office procedures; the drying sequence is a long, time consuming process; and, desiccation of lenses render them useless for any further wear. The second method of water content measurement is by use of the hand refractometer and has been described in different articles by Fatt, Brennen, and Mousa.[2,3,26]

In their use of the hand refractometer, Brennen and Mousa have found a number of advantages. Included in these advantages are: accuracy to 0.2%; excess water on the lens makes no difference in scale reading; lens protein coating has no effect on scale reading; and, its ease of use and cost make it practical for in-office use.

It was for these reasons that the hand refractometer was selected as the instrument of choice for measuring the water content of hydrogels in this study.

The rationale and optical principle of using the hand refractometer to measure the water content of hydrogel lenses is well covered in the literature.[2,16] In a simplified description, the optical principle of the hand refractometer is based on the refractive index of the hydrogel lens. The refractive index of the lens being tested will dictate the angle of refraction of the limiting light ray. The greater the refractive index (or, solids content) of the lens, the lesser will be the refractive index difference between the prism face

and the lens. Thus, the limiting ray will be defelected less resulting in a dark field of reduced size. The rationale for the use of a scale that indicates the solids content of the material being tested is that the refractive index of a simple solvent solution correlates well with the solid content of the solution. Brennan[2] has ascertained the validity of using this instrument for measuring hydrogel lens water content by demonstrating a highly significant correlation between the water content determined by the weight method and the refractometer method.

In summary, a review of the literature pertinent to this study has been presented. There is no doubt about the cornea's need for oxygen. To maintain its optical properties and metabolic functions the cornea acquires most of its oxygen from the atmosphere, while the remainder is supplied by the aqueous. When a hydrogel contact is applied to the cornea, there is a decrease in oxygen available to the cornea. The decrease in oxygen to the cornea is due to the fact that oxygen transmissibility through a lens is less than if there were no lens there at all. The potential corneal problems associated with decreased corneal oxygen have been cited. It has been shown that the water content of hydrogels has an important and significant role in oxygen transmissibility through a lens. Factors that cause lens dehydration have been cited, along with lens parameter changes that accompany changes in lens hydrtation.

Two methods of measuring lens water content have been mentioned. For research studies over extended periods of time there are obvious disadvantages to the weight method of water content measurement. The hand refractometer offers useful advantages in following the changes in water content of hydrogel lenses over a period of months. Generally, the previous research has agreed that there is a decrease in water content from the vial to the eye and little

further change from 30 minutes of wear to the end of the wearing day. However, in none of the studies found in the literature were subjects and their lenses continuously followed at prescribed intervals from before lens dispensing past the first day of lens wear. This investigation, on the other hand, followed subjects and their lenses to a 180 day end-point. Therefore, based on earlier clinical investigations only limited conclusions can be drawn about the changes in water content of hydrogel lenses over an extended period of time with wear.

METHODS

Subjects

In order to gain a more homogeneous experimental group and to control specific variables, subjects had to meet certain predetermined requirements for inclusion into the study.

Subjects had to be between nineteen and thirty-six years of age. Refractive errors were limited to a range of -1.00 to -7.00 diopters. Astigmatic refractive error was limited to less than 1.00 diopter; because, only spherical contact lenses were fitted for this study. Visual acuities had to be correctable to 20/20 or better in each eye by both spectacles and contact lens. Participation in this study required that subjects were prior hydrogel lens wearers for at least six months preceeding the start of the study, and that their eyes have clear ocular media and be free of active inflammations and infections. No subjects were selected who had a history of significant ocular surgery or trauma, a tear break-up time of less than 10 seconds, or poor personal hygiene.

Having met these requirements thirty-four subjects (twenty-three white females and eleven white males), were selected to participate in this study. Once selected, all subjects signed a consent form as approved by the Pacific University Institutional Review Board. (Appendix A)

Twenty-nine of the selected subjects were continued from a previous study done by Dr.'s Slater, Allen, and Marrs at Pacific University College of Optomerty that had similar population characteristics. Approximately ten subjects were screened to gain the additional five subjects.

All subjects were trained in a care regimen designed for this project. All necessary contact lens supplies were given to subjects as needed throughout the study. To the best of this investigator's knowledge, all subjects cared for their

lenses in the manner designated. During the course of the study two female subjects developed a chemical sensitivity to the Allergan Extenzyme proteolytic cleaner and were switched to the Alcon Optizyme proteolytic cleaner. A printed instruction form, *Caring For Your Soft Contact Lenses* (Appendix B.) was given to each subject to support what was recommended in the clinic.

All subjects did not have the same lens wearing schedule. A recommended wearing schedule had been predetermined before the start of the study and depended upon professional assessment and the subject's past lens wear history. The subjects were on one of three wearing schedules: (1) daily wear only, (2) daily wear with on occasional overnite wear, and (3) extended wear not to exceed 6 nights in succession. Although the wear schedule was not controlled, the number of hours each lens was worn was recorded and is found in the subject files under the column heading "HRS CL W." This indicates the number of hours that the subject had worn the lenses since the last visit. Appendix D. has the explanation of column headings for subject data files.

Six control lenses, two in each of the three water content categories, were used in the research. These six lenses were selected with parameters that were similar to those lenses worn by subjects in each of the lens groups of the study.

Materials

The hydrogel lenses used in this research represented the three primary water content categories: low, medium, and high. Lens names, manufacturers, and characteristics may be found in the accompanying table.

TABLE I
Hydrogel Contact Lenses Used in Study

LENS	MANUFACTURER	WATER CONTENT	POLYMER	n	Dk
CSI-T	Syntex Ophthalmics	38.5%	crofilcon A	1.44	8.0
Hydrocurve II	Barnes Hind	55.0%	bufilcon A	1.41	16.0
Permaflex	CooperVision	74.0%	surfilcon A	1.38	34.0

Source: Manufacturer Specification Sheet

Each subject wore the same type of contact lens on each eye. The parameters for the proper lens prescription had been determined during a trial contact lens fitting evaluation. At the onset of the study ten subjects (20 eyes) were wearing the low water content CSI-T lens, fourteen subjects (28 eyes) were wearing the Hydrocurve II lens, and ten subjects(20 eyes) were wearing the high water content Permaflex lens.

Table II shows the high, low, and average (to nearest .25D) power of the subject lenses in each of the three lens groups.

TABLE II
Subject Lenses--Range and Average Power

	CSI-T	HC II	PERM
Highest lens power	-7.00	-7.00	-7.00
Lowest lens power	-1.50	-1.00	-1.25
Average lens power	-3.00	-3.25	-3.25

Source: Experimental Data

Equipment

The Atago N series 1, 2, and 3 hand refractometer were used for this study. The refractometer consists of an eye piece, body, prism, daylight plate, and calibration adjustment screw (Figure 1). The hand refractometer was described by Brennen and Mousa[2,3] as a valid instrument for measuring the water content of hydrogel lenses. Calibration of the refractometers was verified before the start and twice a month throughout the study by the method described in the Atago Co. Ltd instrument instruction pamphlet. No additional adjustments were deemed necessary.

A reading on a hydrogel contact was taken by placing the lens, with the concave surface upward, on the prism surface. It was not possible for the contact lens to cover the entire prism surface as recommended for sample measurement in the instrument instructions. Through repeated measurements on practice hydrogel lenses in the pre-investigation assessment, it was found that the most reliable and consistent measurements were obtained by placing the lens on the upper-most area of the prism surface.

Once the lens was in position it was flattened by the "daylight plate." The "daylight plate" was closed gently over the lens and held firmly in place with the thumb and forefinger (Figure 2). The reading for that lens was then taken by looking at the scale through the eyepiece while the refractometer was held 6 to 15 cm. from an intense light source.

The light source was a Light-Olier desk lamp with a #93 Westinghouse bulb with characteristics of 12-16V/5CP. To insure a consistent light source output a General Electric light meter type 213 was used twice a month during the project to measure light intensity. The light source remained a consistent 500 footcandles throughout the duration of the study.

The view through the eye-piece is a circular field with a vertically positioned scale in its center. The reading was taken where the solid boundary, between the light and dark sections of the field, intercepted the scale. The smallest increment of measurment on the scale was 0.2%.

That reading gave the percentage of the solid content of the hydrogel lens. That percentage was then subtracted from 100% to obtain the water content percentage. It was necessary to use three Atago refractometers since hydrogel lenses of low, medium, and high water content were used in this study (Figure 3). Those refractometers used and the ranges each could measure were:

1) Atago N1 measures solid of 0%-32%, and water content of 100%-68%

2) Atago N2 measures solid of 28%-62%, and water content of 72%-38%

3) Atago N3 measures solid of 58%-90%, and water content of 42%-10%

Procedure

In addition to water content measurements, data for supplementary tests and observations were collected at Day 0, the day of lens dispensing, and at the following subsequent intervals: 30 minutes, Day 1, Day 7, Day 30, Day 60, Day 90, Day 120, Day 150, and Day 180. All measurements were performed by the same person, with the same equipment, and in the same room. Temperature of the room was monitored, but control was impossible. Temperatures ranged from 21°C to 24°C over the approximate ten month period of the study. All subject visits were scheduled from mid-day on to ensure that the lenses had been worn for a minimum of four (4) hours. At prescribed intervals data were recorded in the order shown on the *HYDROGEL CL RESEARCH FOLLOWUP FORM* (Appendix C).

Each visit included, in sequential order, the following assessments and

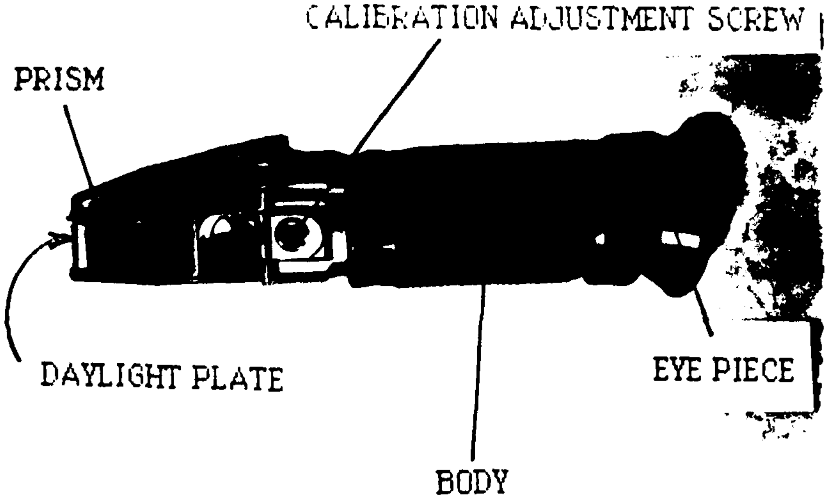


Figure 1.
The Atago N Refractometer

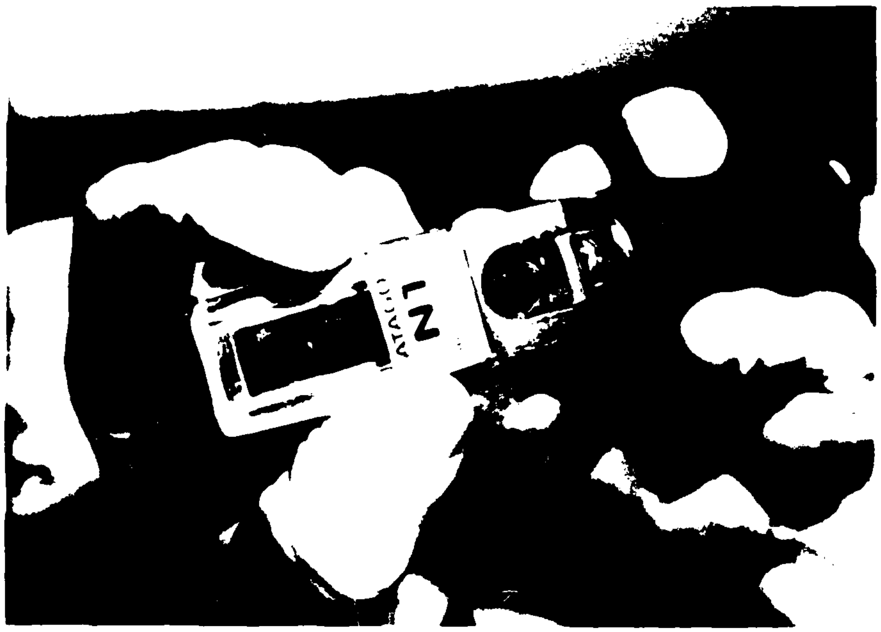


Figure 2.
Holding a lens in place
to take a reading

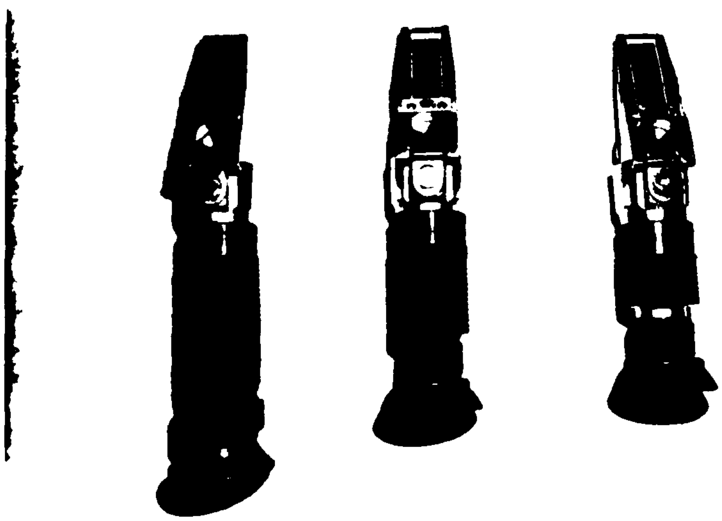


Figure 3.
Atago N1, N2 & N3
Hand Refractometers

tests:

1. Subject information--subjects reported the number of hours the contact lenses had been worn since their last visit, when and how many enzyme cleanings had been performed, and, anything positive or negative about their contact lenses.

2. Auto-refraction through lenses--measured with the Humphrey Instruments Automatic Refractor through contact lenses.

3. Slit lamp biomicroscopy--using the Mentor slit lamp to examine the contact lens, cornea, and anterior segment of each eye. This was done before and after lens removal.

4. Distant Snellen visual acuity--measured through contact lenses with a Marco projector and an AO Project-O-Chart.

5. Retinoscopy--measured through contact lenses using a Copland 360 Streak retinoscope and a Bausch and Lomb Green's Refractor.

6. Water content measurement--determined with the appropriate hand refractometer.

7. Auto-refraction without lenses--measured with the Humphrey Instruments Automatic Refractor.

8. Auto-keratometry without lenses--measured with the Humphrey Instruments Automatic Keratometer.

Complete subject information and numerical data were then transferred to the subject files. Individual subject files for the CSI-T lens wearing subjects are in Appendix E, Hydrocurve II files are in Appendix F, and Permaflex files are in Appendix G. An explanation of the column headings on the subject data forms is found in Appendix D. Within each lens type, subject data forms are organized in alphabetical order by initials of their last name. If the letter "B" follows the

patient identification number (PT ID*), that indicates data gathered on a second lens for that subject. This would be the case for those subjects that had problems; such as a tear, rip, or crack in the first lens.

The data gathering intervals are important to this study and the points Day 0 and 30 min need further explanation. The Day 0 measurement of water content was taken only after the new lens had been rinsed and equilibrated for a minimum of 24 hours in a contact lens vial of fresh, unpreserved, normal (0.9%) saline. This was done to give standardization to the solution from which all lenses were first measured. This solution was also the same that all subjects prepared and used as their saline solution. It should also be noted that the Day 0 measurement was taken on the day the lens was dispensed to the subject, but before it had ever been worn. The 30 minute measurement of water content was performed on the day of dispensing after the new lens had been worn by that subject for 30 minutes. All further water content measurements and data gathering were made at the appropriate follow up visit.

The actual procedure for making a water content measurement on a subject's contact lens during a visit proceeded as follows. After "lens on" tests were completed the subject was seated comfortably in an optometric examination chair. The investigator prepared for removal of the subject's contact lens by thoroughly washing his hands, rinsing them with unpreserved saline, then patted them dry on a soft cotton towel. He then removed the hydrogel lens from the subject's right eye and placed the lens on the prism of the Atago hand refractometer. The scale reading was then taken as previously described. While the lens remained on the prism, two additional readings were taken by simply raising the daylight plate, then flattening the lens once again. The readings were taken if fairly rapid succession. The time from lens removal to

end of three readings was no longer than 15 seconds per lens.

The three solid content lens percentage values were recorded on the subject's data form and averaged. That mean value was then subtracted from 100% to give the percent water content for that lens, for that subject's eye, for that day. The recorded percentage can be found in the subject data files (Appendix E,F,G) under the column marked %HOH. The same sequence was then carried out for the subject's left contact lens.

Two new, unworn, control lenses in each of the three water content categories were also measured for percent water. These repeatability and reliability measurements were made on the control lenses at intervals that coincided with those made on subject's lenses. Control lens data are found in Appendix H. After each of the control lens measurments, the lens was rinsed with and placed in a vial of fresh, unpreserved, normal (0.9%) saline, then capped and sealed.

RESULTS

Statistical analysis of the lenses completing the 180 day study indicate that there is a significant change in water content values in each of the three lens types. As shown in Tables III, IV, and V, the differences in the mean water content across the series of measurement sessions were significant at the .0001 level. Since each of the lens types showed a statistically significant change in water content, Scheffe tests were used to determine which pairs of means differed significantly. Appendices I, J, and K contain the statistical analysis for the three lens groups. The significant pairs are marked by an asterisk (*) and found in the Scheffe F-test column.

All three lens types showed a significant difference between Day 0 and the other 9 intervals of measurement.

The CSI-T lens group had three additional points of significance: 30 min vs Day 60; Day 60 vs Day's 150 and 180.

The Hydrocurve II lens group had 15 other points of significance: 30 min vs Day's 7, 30, 60, 90, 120, 150, 180; Day 1 vs Day's 7, 30, 60, 90, 120, 150, 180; and, Day 7 vs Day 60.

The Permaflex lens group had no further points of significance after the above mentioned Day 0 comparisons.

The most appropriate method of data treatment, for determining the significance of water content change, was a simple one-way analysis of variance (ANOVA) for each of the three lens types. In this study the simple ANOVA was used to test the hypothesis that two or more independent samples were drawn from populations having the same mean.[42] When related to this study, this means the ten measurement intervals of the group of subjects wearing a specific lens type. An Apple Macintosh Plus computer with the StatView 512+ Statistical software program was used for statistical

Table III

CSI-T STATS

One Factor ANOVA-Repeated Measures for $X_1 - X_{10}$

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
Between subjects	19	12.28	.65	4.8	.0001
Within subjects	180	24.23	.13		
treatments	9	8.95	.99	11.13	.0001
residual	171	15.28	.09		
Total	199	36.51			

Reliability Estimates for- All treatments: .79 Single Treatment: .28

Table IV

HYDROCURVE II STATS

One Factor ANOVA-Repeated Measures for $X_1 - X_{10}$

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
Between subjects	24	426.11	17.75	3.99	.0001
Within subjects	225	1002.27	4.45		
treatments	9	814.57	90.51	104.16	.0001
residual	216	187.7	.87		
Total	249	1428.37			

Reliability Estimates for- All treatments: .75 Single Treatment: .23

Table V

PERMAFLEX STATS

One Factor ANOVA-Repeated Measures for $X_1 - X_{10}$

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
Between subjects	13	110.33	8.49	6.11	.0001
Within subjects	126	174.99	1.39		
treatments	9	163.92	18.21	192.42	.0001
residual	117	11.07	.09		
Total	139	285.33			

Reliability Estimates for- All treatments: .84 Single Treatment: .34

calculations.

Only those lenses that were measured at each interval to the Day 180 end-point are included in data analysis. This included an n=20 for CSI-T, n=25 for Hydrocurve II, and n=14 for Permaflex lenses. Gathered data were compiled and the mean values were derived for each measurement interval of the three lens types. Table VI, titled, "Subject and Control Lenses--Combined Means and Standard Deviations," shows these values. Graphs A, B, and C give a pictoral representation of the change in mean water content over the 180 day period compared to the mean water content of the control lenses taken at the same measurement intervals.

Table VII is divided into columns for each of the three lens types and shows the number of lenses that completed the 180 day study in row A. Rows B through F show causes that prevented some lenses/subjects from completing the full study. The last row, G, shows the total number of lenses dispensed.

TABLE VI

LENSES TO COMPLETION--PROBLEMS--LENSES DISPENSED

	CSI-T (38.5%HOH)	HC II (55%HOH)	PERM (74%HOH)
A.) LENSES TO COMPLETION	20	25	14
B.) PHYSIOLOGICAL INTOLERANCE	0	2	4
C.) EDGE NICK/CHIP	0	2	4
D.) CRACK/SPLIT/TORN (NOT EDGE)	1	3	0
E.) CHANGE FIT CHARACTERISTICS	0	1	0
F.) MOVED FROM AREA	0	0	2
G.)TOTAL LENSES DISPENSED	21	33	24

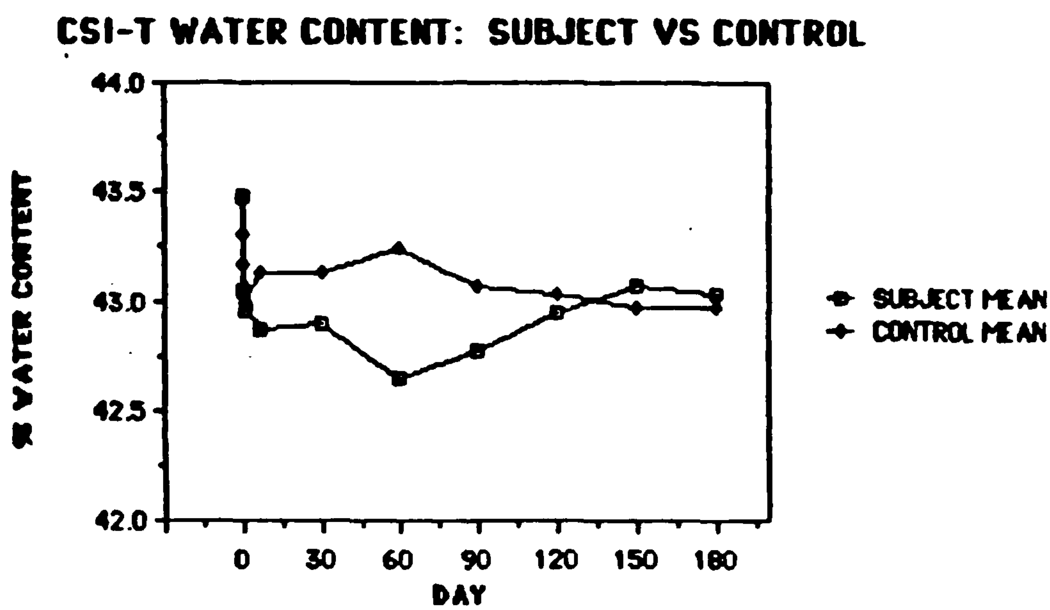
95% of CSI-T, 76% of Hydrocurve II, and 58% of the Permaflex lenses completed the project. 5% of the CSI-T lenses, 21% of the Hydrocurve II lenses,

SUBJECT AND CONTROL LENSES--COMBINED MEANS and STANDARD DEVIATIONS

	CSI-T SUBJ LENS MEAN(SD)	CSI-T CONT LENS MEAN(SD)	HC II SUBJ LENS MEAN(SD)	HC II CONT LENS MEAN(SD)	PERM SUBJ LENS MEAN(SD)	PERM CONT LENS MEAN(SD)
DAY 0	43.48(.42)	43.30(.42)	56.23(1.6)	55.58(.35)	72.91(.91)	72.61(.11)
30 MIN	43.04(.37)	43.17(.42)	53.72(.98)	55.80(.09)	69.59(1.2)	72.80(10)
DAY 1	42.96(.47)	43.00(.47)	53.01(1.0)	55.64(.05)	69.47(.79)	72.57(.14)
DAY 7	42.87(.38)	43.13(.28)	51.52(1.8)	55.43(.14)	69.28(.99)	72.77(.05)
DAY 30	42.89(.31)	43.13(0)	50.77(2.0)	55.03(1.2)	69.21(.86)	72.70(.24)
DAY 60	42.64(.43)	43.24(.05)	50.20(1.7)	54.57(.71)	69.16(.92)	72.60(.10)
DAY 90	42.77(.38)	43.07(0)	50.76(2.0)	54.70(.33)	69.22(.99)	72.60(.38)
DAY120	42.95(.30)	43.03(.14)	50.61(1.7)	54.60(.38)	69.34(.95)	72.77(.33)
DAY150	43.07(.39)	42.97(.14)	50.81(1.5)	54.23(.14)	69.31(1.1)	72.53(.28)
DAY180	43.03(.32)	42.97(.14)	50.98(1.4)	54.07(0)	69.37(.98)	72.93(0)

TABLE VII

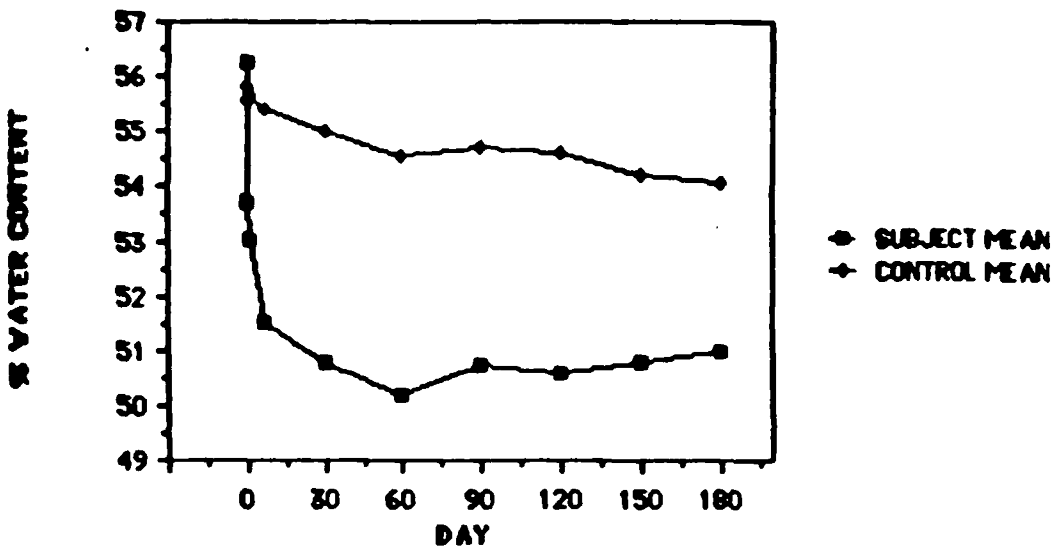
Graph A.



Mean Water Content Values Plotted from Day 0 to Day 180

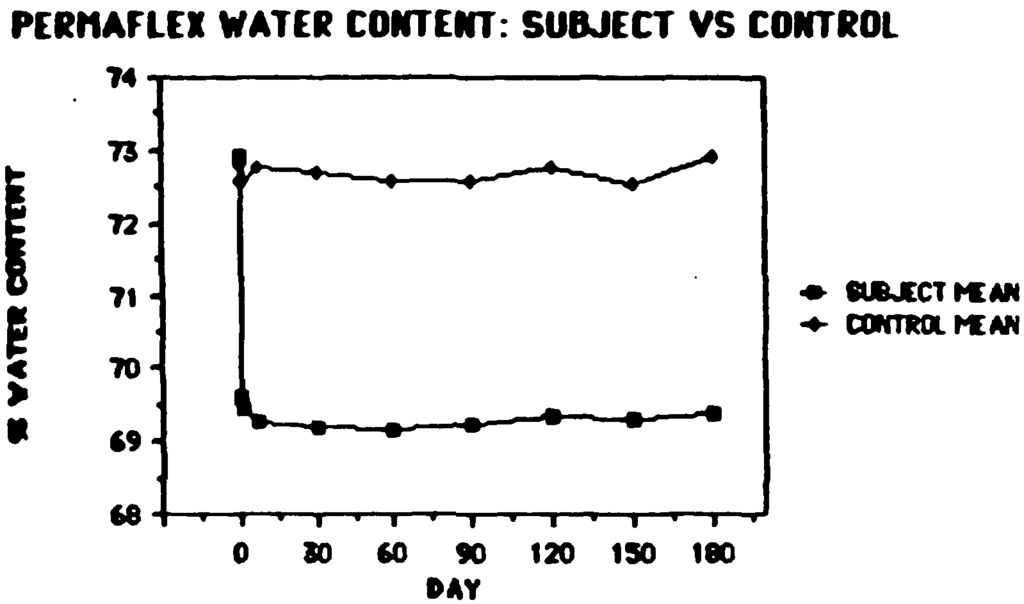
Graph B.

HC II WATER CONTENT: SUBJECT VS CONTROL



Mean Water Content Values Plotted from Day 0 to Day 180

Graph C.



Mean Water Content Values Plotted from Day 0 to Day 180

and 33% of the Permaflex lenses had physiological problems, nicks, chips, cracks, or tears (rows C,D,E). One Hydrocurve II lens did not complete the study because it was necessary to change the fit characteristics well into the study. One subject with Permaflex lenses (two lenses) moved from the area so further data gathering was not feasable.

Reliability tests that were conducted on the control lenses with the appropriate refractometer showed very repeatable results. The ten same day measurements that were made on the two CSI-T control lenses varied from zero to 2.44%. Same day measurements on the Hydrocurve II control lenses varied from zero to 3.52%. Same day measurements on the Permaflex control lenses varied from zero to 2.88%.

Assessments were also made on the variability in measurements of the control lenses. Variability between intervals in water content of the CSI-T control lenses ranged from zero to 1.39%. Through the course of the study the Hydrocurve II controls varied from zero to 3.33%. The Permaflex controls varied from zero to 0.09%.

DISCUSSION

The data demonstrate some interesting comparisons when related to the results of past researchers. Tables VIII, IX, and X compare the manufacturers listed water content to the water content as measured by the refractometer on lenses taken from the vial in the fully hydrated state.

TABLE VIII
LOW WATER CONTENT LENSES (<40%HOH)

Investigator	Lens Type	Manufacturer %HOH	Measured %HOH	% Difference
Luehrs	CSI-T	38.5	43.5	11%-higher
Brennan	B&L	38.0	41.3	8%-higher
Brennan	Hydron Zero 6	38.0	40.8	7%-higher
Fatt	Hydron	38.0	43.0	12%-higher
Mousa	Alden	35.5	36.6	3%-higher
Mousa	Alden	35.5	37.0	4%-higher

TABLE IX
MEDIUM WATER CONTENT LENSES (40-60%HOH)

Investigator	Lens Type	Manufactures %HOH	Measured %HOH	%Difference
Luehrs	Hydrocurve II	55.0	56.2	2%-higher
Brennan	Hydron Z 55	55.0	51.8	6%-lower
Brennan	Hydron Z 55	55.0	52.7	4%-lower
Fatt	Snoflex	50.0	54.0	7%-higher

TABLE X
HIGH WATER CONTENT LENSES (>60%HOH)

Investigator	Lens Type	Manufactures %HOH	Measured %HOH	%Difference
Luehrs	Permaflex	74.0	72.9	1%-lower
Brennan	Gelflex 75	75.0	72.5	3%-lower
Fatt	Duragel	73.5	73.0	1%-lower

In comparing the results of this present study to other investigator's findings (Tables VIII, IX, X) interesting observations may be made. In the low water content lens group all investigators measured the percent water content higher than that stated by the manufacturer. The difference between researchers varied from 3% to 12% higher.

In the high water content lenses each investigator noted a lower value than the manufacturer stated. Investigator differences ranged from 1% to 3% lower. In the medium water content lenses the findings were mixed. Of the four researchers two measured higher and two lower when compared to manufacturer values. The results of this study compare most favorably, in all three lens groups, to the results of the research done by Fatt.

Statistical analysis of the data has shown that each of the three lens types showed a significant change in water content. Further analysis of the data shows that the greatest percentage of change took place between the interval Day 0 and after the initial 30 minutes of lens wear. Table XI shows those decreases in water content of the three lens types and also the percent decrease in water content from the highest reading to the lowest reading at Day 60. It is interesting to note that the lowest mean water content value of all three lens types occurred at Day 60. At this time there does not seem to be any obvious reason for this finding.

TABLE XI

% CHANGE IN HOH BETWEEN DAY 0, 30 MIN, AND DAY 60

LENS	DAY 0-30 MIN	DAY 0-DAY 60
CSI-T	1%-decrease	2%-decrease
HYDROCURVE II	4%-decrease	11%-decrease
PERMAFLEX	5%-decrease	5%-decrease

Table XII has been compiled to show the results of this study to other researchers findings during that initial 30 minutes of wear. The table compares the water content measurement of similar lenses under similar conditions after 30 minutes of wear.

TABLE XII
COMPARISON OF %HOH CHANGE AFTER 30 MIN WEAR

Investigator	Lens Type	Measurement Method	% Decrease HOH After 30 Min
LOW WATER CONTENT LENSES (<40%)			
Luehrs	CSI-T (38.5)	refractometer	1.0%
Andrasko	AO Softcon (38.6)	weight	10.4%
Wechsler	Hydron (38.6)	weight	19.1%
Andrasko	unknown (38.6)	weight	11.0%
MEDIUM WATER CONTENT LENSES (40-60%)			
Luehrs	Hydrocurve II (55)	refractometer	4.0%
Kohler	Hydrocurve II (55)	weight	6.6%
HIGH WATER CONTENT LENSES (>60%)			
Luehrs	Permaflex (74)	refractometer	5.0%
Andrasko	Duragel (73)	weight	14.8%
Wechsler	Permalens (71)	weight	12.9%
Kohler	Permalens (71)	weight	15.3%

As can be seen from Table XII other studies, as well as this one, found a decrease in the same initial 30 minutes of hydrogel lens wear. Their findings show significantly greater decreases in water content during that initial time period for the low and high lens groups than did this study. The medium water content comparisons during the time period was resonably similar. The difference is probably in the method of measurement.

Three factors can be attributed to the decrease in water content from before lens wear through the first 30 minutes of wear. These factors all come under what most eye care professionals term "the period of equilibration." First is the change in temperature. There is an approximate 14°C change in temperature from normal room temperature of the vial (20-22°C) from which the lens was removed to the ambient temperature of the human eye (34-36°C).[35] Next, there is the possible change in pH. The lens is taken from the constant pH of the vial solution to the variable pH of the human eye. The third factor is the change in humidity from the fully hydrated state in the vial to the variable humidity of the eye and surrounding environment. Prior research[21,25-28] has shown these three factors, with the change in temperature being the primary, to be the major reasons that the most significant amount of hydrogel lens dehydration occurs within the 30 minutes following contact lens insertion.

From the 30 minute measurement interval to Day 180 the Permaflex and CSI-T lenses did not show any further substantial changes in water content. Even though the CSI-T lens group showed two statistically significant intervals of Day 60 vs Day's 150 and 180, these were determined to be clinically insignificant after review of the various tests and recordings taken during those subject visits.

The Hydrocurve II lens group had fifteen other points of significance after Day 0 comparisons. Careful review of these points of significance shows that there was only one point of significance after the Day 1 comparisons. This suggests that the Hydrocurve II lens took a day to fully equilibrate to these subjects' eye environment, while the subjects of the other two lens groups reached equilibration within the normal 30 minutes. The one extra point outside the Day 1 interval was determined not to be clinically significant.

Although the three lens types evaluated here yielded similar characteristics at many intervals, there are some noteworthy discrepencies. These appear to be related to the degree of accuracy of reading the refractometer scale. One striking discrepency is that the Hydrocurve II lens group showed a much larger between-interval variability than the CSI-T lens or the Permaflex lens. The CSI-T lens group showed just a few between-interval variabilities. The Permaflex lens showed no further between-interval varibility outside the Day 0 variability.

After making hundreds of readings on hydrogel lenses with the hand refractometer, this investigator feels qualified to make a statement about the quality of the readings. Permaflex lenses gave a crisp, sharp demarcation line across the refractometer scale, thus making them the easiest to read. The CSI-T lens readings weren't quite as distinct, but gave good readings. The Hydrocurve II lenses showed a small lightly colored horizontal band between the light and dark areas of the field. This made the scale reading somewhat vague. Therefore, investigator interpretation was needed on what was felt to be the proper reading for that lens. Because of this, the Hydrocurve II lenses were judged to be the most difficult of the three to measure consistently accurate.

From examining the mean data (Table VI), it is apparent that after the Day 1 interval all three lens groups show very little change in their water content at succeeding intervals to Day 180. Graphical representation (graphs A,B,C) of those changes appear almost level after the Day 1 interval. Wechsler[4] has stated that after the first hour hydration remains almost constant for the next 13 hours (endpoint of study) of wear.

Seger, et al[43] commented that lenses, under certain conditions of wear and care, will maintain stable oxygen permeability for at least a year and probably

longer. Since oxygen permeability is directly proportional to water content,[23] the previous statement suggests that the water content of such a lens will also remain constant. The results of this investigation provides support for that statement, at least up to the six-month point.

This research project did not put its subjects into any uncompromising predicaments. The majority of those that participated in this investigation tolerated it well. Subject compliance to the complete regimen of contact lens cleaning and disinfecting was carried out very well. Biomicroscopic examination revealed no development of neovascularization through the course of the study in any of the subjects. Some subjects, although without subjective symtoms, showed evidence of engorgement of limbal vessels.

When a subject needed a replacement lens, for the reasons discussed earlier, an appropriate lens was ordered and dispensed. If it was determined that there was sufficient time before the projected end of the study, data on the newly dispensed lens was started again for that eye at Day 0. The lens on the fellow eye was allowed to continue on and measured at its appropriate interval. A time frame was selected for new data gathering to prevent a possible continuous repetition of new starts by any one subject.

Physiological intolerance, as referred to in Table VII, was evident in both eyes of one female wearing the Hydrocurve II lens soon after her Day 60 visit. She presented with chief complaints of lens discomfort after a period of wear usually longer than 3 to 4 hours, mild photophobia, slightly blurred vision, and scleral injection. Biomicroscopic examination revealed epithelial microcysts and subepithelial infiltrates. These defects were generally located in the inferior half of the cornea. There was also injection of the bulbar conjunctiva. These symptoms coincided with the period of time she started taking Acutane

orally for complexion problems. The most probable cause for this subject's problems was corneal hypoxia brought on by dry eyes and lens wear.

There was evidence of physiological intolerance in both eyes of two other subjects, one male and one female wearing the Permaflex lens. In addition to the subjective symptoms and clinical signs similar to those of the case just described, both of these subjects had excessive tearing. In these two instances a viral-like syndrome was suspected.

These three subjects were taken off contact lens wear, followed for several weeks until corneas were clear and symptoms were resolved, then discontinued from participation in the study.

Two important concepts need to be reiterated and emphasized. First, the most significant water content decrease that is going to take place in the three hydrogel lens groups of this research will occur within the first 30 minutes of wear. This decrease in water content does affect lens parameters. These parameters are influential in the vision and comfort of a patient wearing hydrogel lenses.

Second, is the concept that there are three primary causes for the initial decrease in lens water content. From the vial to the eye and during the period of equilibration there are significant changes in temperature, humidity, and pH. Although it was not the purpose of this study to determine and isolate these factors, suspicion leads me to believe that those three changes are the causes because of the results found in the literature.

It is apparent that allowances for deviation in the normal data should have been addressed. Suggestions for future research would be to make provisions in the research protocol for such data. Having done that in this study probably would have given support to conclusions made about originally asked questions.

One final comment concerning water content measurements in relation to enzyme cleanings. Does time, in hours or days, from enzyme cleaning to water content measurement make a difference? This is something for future investigators to control carefully or research further.

CONCLUSIONS

An hypothesis and four secondary questions were stated at the onset of this long term research project. These queries concerned changes in water content of hydrogel lenses that have not been fully answered in previously published literature. Data collected on water content of three types of lenses following patient wear would seem to offer the best approach for answers to those original questions.

First was the hypothesis: "Do significant water content changes occur in hydrogel lenses as a result of subject wear?" The raw data and statistical analysis of that data showed the water content of all three lens groups did change significantly. The largest percentage change came during the first 30 minutes of lens wear. Past research has linked the decrease seen in water content during that first 30 minutes to changes in temperature, humidity, and pH as the lens is taken from its vial and applied to the eye.

Fitting hydrogel lenses requires a wait of 20-30 minutes after initial lens application before making any type of lens evaluation or assessment. The wait during that period of in vivo equilibration is important; because, important lens parameters such as base curve, power, and diameter are being effected.

The first question dealt with correlation to prior research. Two tables and an accompanying discussion have shown that the results of this study do correlate with past studies. One has to realize that there are going to be unpredictable differences between researchers and even between results of the same experiment done by the same individual. The most appropriate correlations could only be made in comparisons to the manufacture's stated water content with the pre-wear water content measurement, and the changes during the first thirty minutes of wear. Only limited comparisons could be

made; because, published data on water content changes over long periods of time is minimal. This study was unique in the fact that it followed water content changes of three lens types at ten specific intervals from before lens wear to 180 days.

Second, water content changes did follow a predictable pattern in all three lens groups, which answers another of the original questions. The changes were predictable in the sense that there was a significant decrease in the first 30 minutes of wear. The decreases in water content continued as the Day 1 measurement was different from 30 min, and Day 7 was different from Day 1. From Day 0 to Day 7 all mean water content values were less than the successive measurement. From Day 7 on, each lens group graphically appeared to reach a plateau (a relatively constant water content) and maintain a fairly straight line to the 180 day point.

Third, was the question of whether or not total hours of lens wear or number of enzyme cleanings performed on the lenses caused any change in lens water content. This investigator initially thought that the cumulative hours a hydrogel lens was worn, and the number of enzyme cleanings a lens went through would affect the lens in a predictable manner. It was thought that the 'wear and tear' on the lens would disrupt the dimensional and optical properties of the lens which would in turn effect lens water content. After careful examination of the results and comparison of statistically significant points within the data this does not seem to be the case. From the information gathered in this study, there is strong evidence that the total number of hours a lens has been worn, and the number of enzyme cleanings do not have an effect on its water content.

Fourth, was the question concerning the relationship between changes in

water content to changes in visual acuity, keratometry, and refraction. The complexity of the variables involved make a statistically valid conclusion nearly impossible. By a cursory look at the subject data the observation was made that these three elements varied slightly during the course of the investigation. No predictable patterns were observed and their changes could not be related to changes in the water content within the three lens groups.

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The United States Air Force continues to research hydrogel lenses to determine if they should or can be worn by flying personnel. With this study, it is my professional judgment that "ground" testing in terms of long term water content changes in hydrogel lenses is complete. I also believe that controlled in-flight testing would reveal the same patterns of water content change as this research has, but the degree of change would be different because of the atmospheric pressure, air movement, and humidity of the aircraft. If water content changes were to be measured in flight, a long term study would not be needed. This study showed a relative leveling off after the first week. Monitoring of in-flight water content changes during the first five to seven days should provide sufficient data.

Data from previous studies indicate, and by the fact that thousands of Americans are prescribed hydrogel contact lenses, that these types of lenses do not produce the post-wear and long term problems associated with PMMA lenses. Information from this study during 180 days gave further evidence that post wear problems were absent. PMMA problems such as edema, spectacle blur, corneal changes with resultant refractive changes, lens decentration, and lens loss are almost nonexistant in properly fit and cared for hydrogel lenses.

Presently, USAF regulations deny aviators the use of any contact lens on or off duty. It is my recommendation that aviators be given the option of wearing hydrogel contact lenses during their non-flying and personal time.

With recent USAF studies[5-9] the three initial concerns of lens decentration, subcontact lens bubble formation, and corneal edema have been answered. These studies provided optimistic conclusions for the use of hydrogel lenses by USAF aviators. This long term study on hydrogel water content changes in

conjunction with the findings of Flynn, et al,[6-9] should eliminate any fears of long term water content changes.

Flynn's studies additionally found that none of the aerospace environmental factors like gravitational forces, hypoxia, and rapid decompression caused any significant problems with wearing soft contact lenses. These studies give positive evidence for aviators wearing lenses. There are, however, practical drawbacks for such contact lens wear. Problems, such as the logistics of care and the additional time needed for professional care, prevent any kind of wide spread implementation in the Air Force at this time.

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APPENDIX A.

IRB APPROVED INFORMED CONSENT FORM

INFORMED CONSENT FORM

1. INSTITUTION

A. TITLE OF PROJECT: Changes in Water Content of Hydrogel Contact Lenses with Wear Over an Extended Period of Time.

B. PRINCIPAL INVESTIGATOR: L. Greg Luehrs 648-4206

C. ADVISOR: Dr. Don West 357-9036

D. LOCATION: Pacific University College of Optometry, Forest Grove, Oregon.

E. DATE: January 1986 to December 1986

2. DESCRIPTION OF PROJECT

This project is designed to observe, monitor, and record the changes in water content of hydrogel contact lenses with wear over an extended period of time. This will be accomplished by fitting hydrogel contact lenses on human subjects and monitoring and measuring the above lens parameter.

3. DESCRIPTION OF RISKS

Participants will be at no greater risk than if fit with contact lenses in a normal clinical situation. As with all contact lens wearers, participants will experience a normal adaptation period during which symptoms may occur. Several clinical instruments will be used in close proximity to the eye, presenting a minor risk of injury. These instruments are routinely used by optometrists, and the investigator is extensively trained in their use.

4. DESCRIPTIVE BENEFITS

This study will serve to increase the understanding of one of the most important characteristic of a hydrogel contact lens--namely the water content. The project will allow study of the changes in water content of the lenses as a function of the

wearing time. This study will help in determining the efficacy of hydrogel lenses and be useful in establishment of optimum fitting and wearing programs.

All examination fees will be waived for all participants. Since the study involves careful monitoring of changes, participants will receive care that is equal to or more intensive than that received by routine contact lens patients.

5. COMPENSATION AND MEDICAL CARE

If you are injured in this experiment it is possible that compensation or medical care will not be available from Pacific University, nor from the experimenter, nor from any organization associated with the experiment. All reasonable care will be used to prevent injury.

6. ALTERNATIVES ADVANTAGEOUS TO SUBJECTS

Participants may find it advantageous to pursue fitting with an alternative brand or type of contact lens or spectacles. If it is determined that such an alternative would be advantageous, a referral will be made to the general clinic of Pacific University College of Optometry.

7. OFFER TO ANSWER ANY INQUIRES

The experimenter will be pleased to answer any questions that might arise at any reasonable time during the course of this study. If you are not satisfied with the answers you receive, please call Dr. James Peterson at 357-0442.

During participation in this research project you are not considered a clinic patient. All questions should be directed to the researcher and/or the faculty advisor who will be solely responsible for any treatment, except in the case of an emergency.

8. FREEDOM TO WITHDRAW

You are free to withdraw your consent and to discontinue participation in this project at any time without prejudice.

I have read and understand the above. I am 18 years of age or over (or this form is signed for me by my parent or guardian).

PRINTED NAME ______________________________

SIGNED ______________________________

ADDRESS ______________________________

CITY/STATE/ZIP ______________________________

DATE ______________ PHONE # ______________

NAME AND ADDRESS OF A PERSON NOT LIVING WITH YOU WHO WILL ALWAYS KNOW YOUR ADDRESS:

NAME ______________________________

ADDRESS ______________________________

CITY/STATE/ZIP ______________________________

APPENDIX B.

CARING FOR YOUR SOFT CONTACT LENSES

CARING FOR YOUR SOFT CONTACT LENSES

For the daily cleaning and disinfecting of your contact lenses I would like you to follow the steps listed below, always starting with the right lens.

1. Set up all of the items you will need to clean and disinfect your soft lenses. (Pliagel, Septicon disenfection system, and Blairex deionizer.)

2. Wash your hands with a pure soap that does not contain additives. Rinse thoroughly.

3. Remove your lenses and clean them with Pliagel (see directions supplied with the package.) This removes inorganic material from the lens surface.

4. Rinse your lenses off with non-thimerosal saline (Blairex system for making normal saline) with a steady stream for about 10 seconds to completely remove cleaner.

5. Place the lenses in the proper Septicon lens baskets and fill the Lensept cup #1 to the fill line with Lensept solution. Place the lens baskets in the cup and tighten the cap.

6. Shake the cup and let stand for 10 minutes.

7. During the 10 minute period, prepare the Rinse cup #2 by filling it to the fill line with your prepared saline solution.

8. After the 10 minutes, transfer the lens baskets from cup #1 to cup #2 which contains the catalyst disk. Tighten the cap and shake. (Discard solution from cup #1.)

9. Allow the lenses to soak in cup #2 overnight. (minimum of 6 hours)

10. In the morning discard the solution in cup #2. Refill cup #2 with prepared saline solution to the fill line. Replace lens baskets, tighten lid, and shake cup. Allow lenses to soak for three minutes.

11. After the three minutes you are ready to wear your contact lenses.

Weekly enzyme cleaning--each week do an enzyme cleaning on your lenses. To do this, first place an Extenzyme tablet in cup #1 and fill to line with prepared saline. Place contacts in the proper baskets and allow to soak for 15-20 minutes. After that time follow steps 2-11 above befor the next day's wear.

Your eyes should always "FEEL GOOD, LOOK GOOD, AND SEE GOOD." If they bother you at any time, or if you have any questions or concerns, I want to be the first to know. You can reach me at the Pacific Univ. Optometry Clinic 357-6151 ext. 2453, or Dr. L. Greg Luehrs 648-4206.

APPENDIX C.

HYDROGEL CL RESEARCH FOLLOWUP FORM

HYDROGEL CL RESEARCH FOLLOWUP FORM

PATIENT NAME ______________________ I.D. # ____________

DATE __________ VISIT: DAY # ______ HRS. CL'S WORN SINCE LAST VIS ____

NUMBER OF CLEANINGS SINCE LAST EXAM ____ LAST CL CLEANING ________

PATIENT STATEMENT/PROBLEMS: ______________________

____

AUTO-REFRACTION OVER LENSES OD ______________
(ATTACHED) OS ______________

SLIT LAMP-- INJECTION ______ NEO-VASC ______ IRITIS ______ EDEMA ______

OTHER OBSERVATIONS ______________________

____

SNELLEN DVA WITH CL'S OD ______ RETINOSCOPY } OD ________
OS ______ OVER CL'S } OS ________

REFRACTOMETER OD ________ OS ________
READINGS ________ ________ ROOM TEMP
________ ________ ________

AVG. READING ________ ________
AVERAGE HOH % ________ ________

AUTO-REFRACTION WITHOUT LENSES OD ______________
(ATTACHED) OS ______________

AUTO-KERATOMETRY WITHOUT LENSES OD ______________
(ATTACHED) OS ______________

NOTES ______________________________________

____

NEXT APPOINTMENT ______________

LGL FORM 2: Rev 19 Feb 86

APPENDIX D.

EXPLANATION OF COLUMN HEADINGS

ON

SUBJECT FILE DATA SHEETS

EXPLANATION OF COLUMN HEADINGS ON SUBJECT DATA FORMS

%HOH= PERCENT WATER OF THE CONTACT LENS DETERMINED BY HAND REFRACTOMETER MEASUREMENTS.

HRS CL W= THE NUMBER OF HOURS THE CONTACT LENS HAS BEEN WORN BY THE SUBJECT SINCE THE LAST VISIT. EACH SUBJECT RECORDS THEIR OWN WEAR TIME AN REPORTS THIS NUMBER.

EXT CLN= THE NUMBER OF EXTENZYME CLEANINGS PERFORMED ON THE LENS SINCE THE LAST VISIT. EACH SUBJECT RECORDS AND REPORTS THIS NUMBER.

DELTA K= THE DIFFERENCE IN CENTRAL KERATOMETRY READINGS AS MEASURED BY THE HUMPHREY AUTO KERATOMETER.

VA CL= DISTANT (6 METERS) VISUAL ACUITY WHILE WEARING CONTACT LENS.

SPH EQ= SUBJECT'S REFRACTIVE SPHERICAL EQUIVALENT, TO THE NEAREST .25 DIOPTER, TAKEN FROM THE READ-OUT FROM THE HUMPHERY AUTO REFRACTOR. THIS MEASUREMENT IS TAKEN ON THE EYE AFTER CONTACT LENS REMOVAL.

OR SPH EQ= SUBJECT'S REFRACTIVE SPHERICAL EQUIVALENT, TO THE NEAREST .25 DIOPTER, TAKEN BY THE HUMPHREY AUTO REFRACTOR WITH THE CONTACT LENS ON THE EYE.

APPENDIX E.

CSI-T LENS

SUBJECT DATA FILES

CSI-T

PT ID #	#404	INITIALS	SC	CL TYPE	CSI-T		
EYE	OD	SEX/AGE	M/29	SPEC RX	-2.50-0.50X177		
CL PWR	-2.5	BC	8.9	DIA	14.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	43.27	0	0	-0.87		-1.75	
30 MIN	43.07	0.5	0	-0.75	20-	-1.75	1.25
DAY 1	42.13	15	0	-1.12	20-	-1.5	1
DAY 7	42.93	96	1	-1.12	20-	-1.75	1.25
DAY 30	42.67	324	3	-1.12	20	-2	1
DAY 60	41.53	484	4	-1	20-	-2	1
DAY 90	42.67	419	4	-0.87	20-	-2	0.75
DAY 120	42.73	478	4	-0.75	20	-1.75	1
DAY 150	43.07	472	3	-1.25	20	-1.75	0.75
DAY 180	43	491	4	-0.87	20	-2.25	0.75

EYE	OS	SEX/AGE	M/29	SPEC RX	-2.25-0.50X010		
CL PWR	-2.25	BC	8.9	DIA	14.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	43.73	0	0	-0.87		-2	
30 MIN	42.93	0.5	0	-0.87	20	-2.25	1.25
DAY 1	42.33	15	0	-1.12	20-	-2.25	1
DAY 7	42.73	96	1	-0.75	20	-2.5	0.75
DAY 30	42.73	324	3	-0.62	20+	-2.25	1
DAY 60	41.73	484	4	-0.62	20-	-2	0.75
DAY 90	41.87	419	4	-0.75	20	-2.25	0.75
DAY 120	42.53	478	4	-0.5	20+	-2	0.75
DAY 150	42.67	472	3	-0.75	20+	-2	1
DAY 180	42.87	491	4	-0.87	20	-2.25	0.75

PT ID #	423	INITIALS	RC	CL TYPE	CSI-T		
EYE	OD	SEX/AGE	M/32	SPEC RX	-2.50 SPH		
CL PWR	-2.5	BC	8.9	DIA	14.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	43.67	0	0	-0.5		-2.5	
30 MIN	43.13	0.5	0	-0.12	20+	-2.25	1.25
DAY 1	43.07	16	0	-1	15-	-2.75	1
DAY 7	42.8	96	0	-0.62	20	-2.5	1
DAY 30	42.67	259	3	-0.5	20+	-2.75	0.75
DAY 60	42.67	505	5	-0.25	25	-2.5	0.5
DAY 90	DISCONTINUE--CENTRAL LENS TEAR--RESTART						
DAY 120							
DAY 150							
DAY 180							
EYE	OS	SEX/AGE	M/32	SPEC RX	-3.50 SPH		
CL PWR	-3.5	BC	8.9	DIA	14.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	42.47	0	0	-0.62		-3.5	
30 MIN	42.33	0.5	0	-0.75	20+	-3.5	1
DAY 1	43.07	16	0	-1.25	20+	-4	1.25
DAY 7	42.47	96	0	-0.5	20-	-3.25	1.25
DAY 30	42.33	259	3	-0.75	20	-3.5	1.25
DAY 60	42.27	505	5	-0.5	20	-3.25	1.25
DAY 90	42.2	409	4	-0.37	20+	-3.5	1.25
DAY 120	42.13	403	4	-0.12	20+	-3.25	1.5
DAY 150	41.93	453	4	-0.37	20	-3.25	1.25
DAY 180	42.13	386	3	-1.25	20	-3.5	1.25

CSI-T

PT ID #	423-B	INITIALS	RC	CL TYPE	CSI-T		
EYE	OD	SEX/AGE	M/32	SPEC RX	-2.50 SPH		
CL PWR	-2.5	BC	8.9	DIA	14.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	44.07	0	0	-0.75		-3	
30 MIN	43.13	0.5	0	-0.62	20	-3	1
DAY 1	43.07	15	0	-0.62	20	-2.75	1
DAY 7	43.47	90	1	-0.75	20+	-3	1
DAY 30	43.27	304	3	-0.5	20+	-2.75	0.75
DAY 60	43.13	403	4	-0.5	15-	-2.5	1
DAY 90	42.93	453	4	-0.62	20+	-2.75	0.75
DAY 120	42.87	386	3	-0.37	20	-2.5	0.75
DAY 150	43.07	395	3	-0.5	20+	-2.5	0.75
DAY 180	43	412	4	-0.87	20+	-3	1

EYE	OS	SEX/AGE		SPEC RX			
CL PWR		BC		DIA			
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0							
30 MIN							
DAY 1							
DAY 7							
DAY 30							
DAY 60							
DAY 90							
DAY 120							
DAY 150							
DAY 180							

CSI-T

PT ID #	433	INITIALS	EC	CL TYPE	CSI-T		
EYE	OD	SEX/AGE	M/28	SPEC RX	-2.5		
CL PWR	-2.5	BC	8	DIA	14.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	43.33	0	0	-0.75		-2.25	
30 MIN	43.07	0.5	0	-0.25	15	-2.5	0.75
DAY 1	42.87	13	0	-0.75	20+	-2.25	0.75
DAY 7	42.87	52	1	-0.5	20+	-2.25	0.5
DAY 30	42.53	272	3	-0.75	15-	-2.25	0.75
DAY 60	42.67	394	4	-0.62	15-	-2.5	0.75
DAY 90	42.87	392	4	-1	15-	-2.25	0.75
DAY 120	42.93	413	3	-1	15-	-2.75	0.5
DAY 150	43.07	354	4	-0.5	15-	-2.75	0.25
DAY 180	42.73	297	4	-0.87	15-	-2.5	0.75
EYE	OS	SEX/AGE	M/28	SPEC RX	-1.75		
CL PWR	-1.75	BC	8.9	DIA	14.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	43.73	0	0	-0.37		-1	
30 MIN	43.27	0.5	0	0	15	-1	1
DAY 1	43.27	13	0	-0.12	20+	-1.25	0.75
DAY 7	43.33	52	1	-0.25	15-	-1.25	0.75
DAY 30	43.47	272	3	-0.62	15-	-1.25	0.75
DAY 60	43.07	394	4	-0.5	15-	-1.75	0.75
DAY 90	43.13	392	4	-0.25	15-	-1.5	0.5
DAY 120	43.13	413	3	-0.25	15-	-1.75	0.75
DAY 150	43.13	354	4	-0.25	15-	-2	0.25
DAY 180	43.13	297	4	-0.5	15-	-1.5	1

PT ID #	434	INITIALS	JED	CL TYPE	CSI-T		
EYE	OD	SEX/AGE	F/25	SPEC RX	-3.50SPH		
CL PWR	-3.5	BC	8.6	DIA	13.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	43.87	0	0	-1.12		-4.25	
30 MIN	42.93	0.5	0	-1.5	20+	-4.25	-0.25
DAY 1	42.87	14	0	-1.12	20+	-4.25	0
DAY 7	42.67	57	1	-1	20+	-4	0
DAY 30	42.93	221	3	-0.62	20+	-3.75	0
DAY 60	42.67	362	4	-0.37	15-	-3.75	-0.25
DAY 90	42.73	315	4	-0.87	15-	-4.25	0
DAY 120	43.13	162	2	-0.5	25	-3.5	0
DAY 150	43.07	180	3	-0.12	25	-4	-0.25
DAY 180	43	205	4	-1	25	-4.25	-0.25

EYE	OS	SEX/AGE	F/25	SPEC RX	-3.25-0.25X005		
CL PWR	-3.5	BC	8.6	DIA	13.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	43.67	0	0	-1		-4.5	
30 MIN	42.93	0.5	0	-1	15-	-4.25	-0.25
DAY 1	42.93	14	0	-1	20+	-4	-0.25
DAY 7	42.73	57	1	-0.62	20	-4	-0.25
DAY 30	42.93	221	3	-0.25	20	-3.75	0.25
DAY 60	42.33	362	4	-0.75	15-	-4.25	0
DAY 90	42.4	315	4	-0.87	20	-4	-0.25
DAY 120	42.53	162	2	-0.5	20	-4	-0.25
DAY 150	42.73	180	3	-1	20	-4.5	-0.25
DAY 180	42.67	205	4	-0.87	20	-4.25	-0.5

CSI-T

PT ID #	401	INITIALS	MG	CL TYPE	CSI-T		
EYE	OD	SEX/AGE	F/35	SPEC RX	-2.75 SPH		
CL PWR	-2.75	BC	8.6	DIA	13.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	43.8	0	0	-0.62		-3	
30 MIN	43.27	0.5	0	-0.75	20-	-3	0.75
DAY 1	43.13	24	0	-1	20-	-3	0.5
DAY 7	43.1	134	1	-0.62	20-	-3	0.5
DAY 30	42.8	444	3	-0.75	20-	-3.25	0.75
DAY 60	42.67	578	4	-0.62	20-	-3.25	0.25
DAY 90	43	668	5	-0.5	25+	-3.25	0.25
DAY 120	43.07	656	4	-0.62	25	-3.25	0.5
DAY 150	42.93	638	4	-1	25	-3.25	0.5
DAY 180	42.87	650	4	-0.75	25	-3.25	0.5
EYE	OS	SEX/AGE	F/35	SPEC RX	-2.50 SPH		
CL PWR	-2.5	BC	8.6	DIA	13.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	44	0	0	-0.12		-2.25	
30 MIN	43.87	0.5	0	-0.5	20	-2.25	0.75
DAY 1	44.07	24	0	-0.12	20	-2.25	1
DAY 7	43.8	134	1	-0.5	20	-2.25	1
DAY 30	43.2	444	3	-0.5	20	-2.5	0.75
DAY 60	42.53	578	4	-0.12	20	-2.5	0.75
DAY 90	43	668	5	-0.37	20	-2.25	0.75
DAY 120	43.07	656	4	-0.25	20	-2.25	0.75
DAY 150	43.13	638	4	-0.37	20	-2.5	0.75
DAY 180	43.13	650	4	-0.5	20	-2.25	0.75

CSI-T

PT ID #	432	INITIALS	LH	CL TYPE	CSI-T		
EYE	OD	SEX/AGE	F/25	SPEC RX	-2.50-0.25X100		
CL PWR	-2.5	BC	8.6	DIA	14.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	43.07	0	0	-1.12		-3	
30 MIN	42.27	0.5	0	-1.12	20-	-3	0.75
DAY 1	42.27	12	0	-0.75	20-	-3	0.25
DAY 7	42.67	87	1	-0.75	20	-2.75	0.5
DAY 30	42.93	287	3	-0.62	20	-3.5	0.25
DAY 60	42.93	388	3	-0.75	20	-3	0
DAY 90	42.87	436	4	-1.12	20	-3	0.5
DAY 120	43.07	384	3	-0.62	20	-2.5	0.75
DAY 150	43.13	428	3	-0.5	20	-3	0.5
DAY 180	43.33	411	4	-0.87	20-	-3	0.5
EYE	OS	SEX/AGE	F/25	SPEC RX	-1.50-0.50X085		
CL PWR	-1.5	BC	8.6	DIA	14.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	43.13	0	0	-0.25		-1.5	
30 MIN	42.87	0.5	0	-0.12	20	-1.25	0.75
DAY 1	42.33	12	0	-0.37	20	-1	0.75
DAY 7	42.87	87	1	-0.25	20-	-1.25	1
DAY 30	43.07	287	3	-0.5	20	-1.75	0.5
DAY 60	43	386	3	-0.5	20	-1.25	0.75
DAY 90	43.07	436	4	-0.12	20+	-1	1
DAY 120	43.07	384	3	-0.5	20+	-1.25	1
DAY 150	43.27	428	3	-0.37	20+	-1.25	1
DAY 180	43.13	411	4	-0.5	20+	-1.5	1

PT ID #	431	INITIALS	MH	CL TYPE	CSI-T		
EYE	OD	SEX/AGE	M/30	SPEC RX	-2.00-0.75X165		
CL PWR	-2	BC	8.6	DIA	14.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	42.93	0	0	-1.12		-1.5	
30 MIN	42.73	0.5	0	-1.12	20-	-1.25	0.5
DAY 1	43.47	16	0	-0.75	20-	-1.5	0.5
DAY 7	42.4	101	0	-0.75	20	-1.25	0.75
DAY 30	42.53	294	3	-1	20-	-1.25	1
DAY 60	42.27	505	5	-1	20-	-1.5	0.75
DAY 90	43.07	460	4	-1.5	20-	-1.5	0.75
DAY 120	43.07	443	4	-0.87	20	-1.25	0.75
DAY 150	42.73	467	4	-1	20-	-1.5	0.5
DAY 180	42.8	470	4	-1	20-	-1.75	0.75

EYE	OS	SEX/AGE	M/30	SPEC RX	-1.75-0.50X165		
CL PWR	-2	BC	8.6	DIA	14.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	43.93	0	0	-1.37		-1.25	
30 MIN	43.27	0.5	0	-1.5	20	-1.5	1
DAY 1	43.33	16	0	-1.5	20-	-1.25	0.75
DAY 7	42.4	101	0	-1.5	25	-1.5	0.75
DAY 30	42.33	294	3	-1.25	20-	-1.25	1.5
DAY 60	42.93	505	5	-1.12	20-	-2	0.5
DAY 90	42.47	460	4	-1.5	20-	-1.75	0.5
DAY 120	43.07	443	4	-1.25	20-	-1.5	0.75
DAY 150	43.27	467	4	-1.12	20-	-1.5	1
DAY 180	43.53	470	4	-1.62	20-	-1.75	0.5

CSI-T

PT ID #	416	INITIALS	WH	CL TYPE	CSI-T		
EYE	OD	SEX/AGE	M/27	SPEC RX	-2.50 SPH		
CL PWR	-2.5	BC	8.6	DIA	13.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	43.6	0	0	-0.75		-2.5	
30 MIN	43.07	0.5	0	-0.5	20	-2.5	0.5
DAY 1	43	14	0	-0.37	15-	-2.25	0.25
DAY 7	43	78	1	-0.25	15-	-2.25	0.5
DAY 30	43.07	397	3	-0.12	20+	-2.5	0.25
DAY 60	42.93	457	4	-0.25	20	-2.5	0.5
DAY 90	43.07	444	4	0	20+	-2.5	0.75
DAY 120	43.47	467	4	-0.12	15-	-2	0.5
DAY 150	43.73	425	4	-0.25	20+	-2	0.5
DAY 180	43.53	436	4	-0.12	20+	-2	0.5
EYE	OS	SEX/AGE	M/27	SPEC RX	-3.50-0.50X060		
CL PWR	-3.5	BC	8.6	DIA	13.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	43.67	0	0	-0.62		-4.25	
30 MIN	43.07	0.5	0	-0.62	20-	-3.75	0
DAY 1	42.53	14	0	-0.62	20	-4	0
DAY 7	42.67	78	1	-0.37	15-	-3.75	0
DAY 30	42.87	397	3	-0.25	20-	-3.75	-0.25
DAY 60	42.73	457	4	-0.62	20	-3.5	0.25
DAY 90	42.53	444	4	-0.25	20+	-3.75	0.25
DAY 120	42.87	467	4	-0.25	20+	-3.5	0.5
DAY 150	42.87	425	4	-0.5	20	-3.25	0.25
DAY 180	43.07	436	4	-0.62	20-	-3.5	0.25

CSI-T

PT ID #	407	INITIALS	LM	CL TYPE	CSI-T
EYE	OD	SEX/AGE	F/25	SPEC RX	-6.50-0.75X160
CL PWR	-7	BC	8	DIA	13.8

XXXXXXXXX XXXXXXXXX XXXXXXXXX XXXXXXXXX XXXXXXXXX XXXXXXXXX XXXXXXXXX XXXXXXXX

	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	42.87	0	0	-1		-7.25	
30 MIN	42.93	0.5	0	-1	25+	-7	3
DAY 1	43.27	15	0	-1.5	20-	-7.25	4
DAY 7	42.53	78	0	-1.75	25	-6.25	2.75
DAY 30	43.2	294	3	-1.12	25	-7	2.25
DAY 60	42.73	491	4	-1.62	25+	-7	2
DAY 90	42.67	241	3	-1.25	25-	-6.75	1.25
DAY 120	43.07	462	4	-1.12	20-	-6.75	1.25
DAY 150	43.47	352	4	-1.12	20-	-6.75	1.25
DAY 180	43.27	357	3	-1.37	20-	-6.75	1

EYE	OS	SEX/AGE	F/25	SPEC RX	-6.75-0.75X175
CL PWR	-7	BC	8	DIA	13.8

XXXXXXXXX XXXXXXXXX XXXXXXXXX XXXXXXXXX XXXXXXXXX XXXXXXXXX XXXXXXXXX XXXXXXXX

	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	43.27	0	0	-1.75		-6.5	
30 MIN	43	0.5	0	-1.75	20-	-6.75	1.75
DAY 1	42.6	15	0	-1.62	25	-6.25	1.75
DAY 7	42.33	78	0	-2	25-	-6.5	2
DAY 30	43.2	294	3	-1.75	25-	-7	1.5
DAY 60	42.93	491	4	-1.75	25+	-6.75	1.5
DAY 90	42.33	241	3	-1.5	25-	-7	2.25
DAY 120	42.93	462	4	-1.75	25-	-6.5	2.5
DAY 150	43.67	352	4	-2	25-	-6.5	2
DAY 180	42.93	357	3	-1.87	25	-7.25	2

PT ID #	425	INITIALS	BVD	CL TYPE	CSI-T		
EYE	OD	SEX/AGE	F/36	SPEC RX	-3.50SPH		
CL PWR	-3.5	BC	8.6	DIA	13.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	43.67	0	0	-1		-3.5	
30 MIN	43.73	0.5	0	-0.87	20+	-3.5	0.5
DAY 1	43.27	24	0	-0.87	20+	-3.25	0.5
DAY 7	43.27	103	1	-0.75	20+	-3.25	0.75
DAY 30	42.93	578	4	-1.12	20	-3.25	0.5
DAY 60	42.93	633	4	-0.87	20	-3.25	1
DAY 90	43.47	641	4	-1	20	-3	1
DAY 120	43.33	634	4	-1	20+	-3.25	0.75
DAY 150	43.33	642	4	-1.25	20+	-3.5	0.5
DAY 180	43.37	638	4	-1.12	20	-3.5	0.75

EYE	OS	SEX/AGE	F/36	SPEC RX	-3.00SPH		
CL PWR	-3	BC	8.6	DIA	13.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	43.53	0	0	-1.25		-3	
30 MIN	43	0.5	0	-1.37	20+	-2.75	0.5
DAY 1	43.2	24	0	-1.12	20+	-3	0.25
DAY 7	42.93	103	1	-1.25	20-	-2.75	0.75
DAY 30	42.6	578	4	-1	20	-3	0.25
DAY 60	42.73	633	4	-1	20	-3	0.25
DAY 90	43.07	641	4	-1.25	15-	-3	0.25
DAY 120	42.93	634	4	-1	20+	-3	0.25
DAY 150	43.13	642	4	-1.25	20	-3.25	0
DAY 180	43.13	638	4	-1.12	20+	-3	0.25

APPENDIX F.

HYDROCURVE II LENS

SUBJECT DATA FILES

HYDROCURVE II

PT ID #	424	INITIALS	DB	CL TYPE	HY CRY II		
EYE	OD	SEX/AGE	F/28	SPEC RX	-1.75		
CL PWR	-150	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	57	0	0	-1.37		-1.25	
30 MIN	55.07	0.5	0	-0.87	20	-1.5	0.25
DAY 1	53.53	15	0	-0.62	20+	-1.25	0.5
DAY 7	52.93	74	0	-0.5	15-	-1.25	0.5
DAY 30	LENS SPLIT CENTER AT 10 DAY POINT--RESTART						
DAY 60							
DAY 90							
DAY 120							
DAY 150							
DAY 180							

EYE	OS	SEX/AGE	F/28	SPEC RX	-1.75		
CL PWR	-1.5	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	57.33	0	0	-1		-1.75	
30 MIN	55.4	0.5	0	-1	20+	-1.5	0.5
DAY 1	55.27	15	0	-1.12	20	-1.75	0.25
DAY 7	53.07	74	0	-1.12	15-	-1.25	0.5
DAY 30	54.07	241	4	-1.25	20	-1.5	0.25
DAY 60	53.33	377	3	-1.12	20	-1.5	0
DAY 90	53.33	307	3	-1.25	20+	-1.5	0.25
DAY 120	52.67	325	4	-1.5	20	-1.75	0.25
DAY 150	51.13	320	4	-1.12	20	-1.5	0.25
DAY 180	51.53	346	4	-1.25	20	-1.75	0

HYDROCURVE

PT ID # 424-E INITIALS DB CL TYPE HYDRCV II

EYE OD SEX/AGE F/26 SPEC RX -1.75

CL PWR -1.5 BC 8.6 DIA 14.5

	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	55.47	0	0	-0.75		-1.25	
30 MIN	54	0.5	0	-0.62	20	-1.25	0.5
DAY 1	53.87	13	0	-0.75	20	-1.25	0.5
DAY 7	53.13	86	1	-1.37	20+	-1.5	0.5
DAY 30	52	277	3	-0.87	20+	-1.5	0.25
DAY 60	52.53	307	3	-1.12	15-	-1.5	0.5
DAY 90	52.47	325	4	-1	20+	-1.5	0.5
DAY 120	51.93	320	4	-0.62	20+	-1.5	0.25
DAY 150	51.67	346	4	-0.75	20+	-1.5	0.25
DAY 180	51.8	332	4	-1	20+	-1.5	0.25

EYE SEX/AGE SPEC RX

CL PWR BC DIA

	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0							
30 MIN							
DAY 1							
DAY 7							
DAY 30							
DAY 60							
DAY 90							
DAY 120							
DAY 150							
DAY 180							

HYDROCURVE II

PT ID #	408	INITIALS	JB	CL TYPE	HY CRV II		
EYE	OD	SEX/AGE	F/19	SPEC RX	-2.25-0.50X095		
CL PWR	-2.25	BC	8.8	DIA	14.5		
XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXXX	XXXXXXXX	XXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR. SPH EQ
DAY 0	58.47	0	0	-0.25		-2.25	
30 MIN	52.53	0.5	0	-0.12	20	-2.25	0.75
DAY 1	52.9	18	0	-0.25	20	-2.5	0.5
DAY 7	51.47	144	1	-0.12	20+	-2.5	0.5
DAY 30	49.87	492	3	-0.12	20+	-2.5	0.5
DAY 60	48.93	592	4	-0.25	20	-2.5	0.5
DAY 90	48.73	566	4	0	20+	-2.5	0.75
DAY 120	49.87	608	4	-0.12	20+	-2.5	0.5
DAY 150	50.87	586	3	-0.12	20+	-2.5	0.75
DAY 180	51.73	594	4	-0.25	20+	-2.5	0.75
EYE	OS	SEX/AGE	F/19	SPEC RX	-2.50-0.50X065		
CL PWR	-2.5	BC	8.8	DIA	14.5		
XXXXXXXX	XXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX	XXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR. SPH EQ
DAY 0	58.73	0	0	-1		-2.75	
30 MIN	52.53	0.5	0	-0.87	20	-2.75	0.5
DAY 1	53.2	18	0	-0.87	20	-2.75	0.75
DAY 7	52.33	144	1	-0.75	20+	-2.75	0.75
DAY 30	49.53	492	3	-0.37	20+	-2.75	0.75
DAY 60	49.07	592	4	-0.62	20+	-3	0.75
DAY 90	49.53	566	4	-0.62	20+	-2.75	0.5
DAY 120	50.13	608	4	-0.87	20+	-3	0.5
DAY 150	50.73	586	3	-0.62	20	-2.75	0.5
DAY 180	51.67	594	4	-0.87	20	-2.75	0.25

HYDROCURVE II

PT ID #	409	INITIALS	CC	CL TYPE	HY CRV II		
EYE	OD	SEX/AGE	F/23	SPEC RX	-2.00-0.25X010		
CL PWR	-2	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	58	0	0	-0.87		-1.75	
30 MIN	54.73	0.5	0	-0.75	20-	-2	1
DAY 1	51.73	14	0	-0.87	20	-1.75	1
DAY 7	51.9	93	1	-0.75	20	-2	0.75
DAY 30	51.67	353	3	-0.5	20	-1.75	1.25
DAY 60	50.8	264	3	-1	20-	-1.5	1.25
DAY 90	DISCONTINUE STUDY--						
DAY 120	SUBJECT DEVELOPED CORNEAL MICROCYSTS/INFILTRATES						
DAY 150							
DAY 180							

EYE	OS	SEX/AGE	F/23	SPEC RX	-2.5		
CL PWR	-2	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	59	0	0	-0.12		-2	
30 MIN	54.2	0.5	0	-0.37	20	-2	0.75
DAY 1	52.6	14	0	-0.5	20	-2	0.75
DAY 7	52.07	93	1	-0.62	20	-2	1
DAY 30	51.07	353	3	-0.62	20-	-1.75	0.75
DAY 60	52.93	264	3	-0.75	20-	-1.5	1.25
DAY 90	DISCONTINUE STUDY--						
DAY 120	SUBJECT DEVELOPED CORNEAL MICROCYSTS/INFILTRATES						
DAY 150							
DAY 180							

HYDROCURVE II

PT ID #	428	INITIALS	TC	CL TYPE	HY CRV II		
EYE	OD	SEX/AGE	F/22	SPEC RX	-6.00-0.75X060		
CL PWR	-6	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	57.27	0	0	-0.12		-6.25	
30 MIN	53.73	0.5	0	-0.37	15-	-6	0.75
DAY 1	54.07	15	0	-0.12	20	-6.25	0.75
DAY 7	52.47	136	1	-0.12	20+	-6.25	1
DAY 30	51.73	282	3	-0.12	20+	-6.25	1
DAY 60	49.93	413	4	-0.37	20-	-6.25	1
DAY 90	51.33	402	4	-0.87	20	-5.75	1.25
DAY 120	51.73	414	4	-0.25	20+	-5.75	1.25
DAY 150	51.93	302	4	-0.37	20+	-5.75	1
DAY 180	51.73	308	4	-0.5	20+	-5.75	1
EYE	OS	SEX/AGE	F/22	SPEC RX	-5.50-0.50X095		
CL PWR	-5.75	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	55.13	0	0	-0.5		-5.75	
30 MIN	54	0.5	0	-0.37	15-	-5.75	0.75
DAY 1	53.87	15	0	-0.75	20+	-5.75	1
DAY 7	53	136	1	-0.25	15-	-5.75	1
DAY 30	51.47	282	3	-0.5	20+	-5.75	0.75
DAY 60	50.33	413	4	-0.5	20+	-5.75	1
DAY 90	51.87	402	4	-0.37	20+	-5.75	1.25
DAY 120	52.47	414	4	-0.25	15-	-5.25	1.25
DAY 150	52.67	302	4	-0.5	20+	-5.75	1.25
DAY 180	52.53	308	4	-0.5	20+	-5.5	1.25

HYDROCURVE II

PT ID #	406	INITIALS	BD	CL TYPE	HYD CRV II		
EYE	OD	SEX/AGE	M/27	SPEC RX	-1.5		
CL PWR	-1.5	BC	9.1	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	55	0	0	-1		-1.25	
30 MIN	52.67	0.5	0	-0.87	20-	-1.25	0.25
DAY 1	51.87	24	0	-0.87	20-	-1.25	0.25
DAY 7	47.27	158	1	-1	15-	-1.25	0.25
DAY 30	47.27	474	3	-0.75	15	-1.25	0.25
DAY 60	47.4	648	5	-0.75	15-	-1.25	0.5
DAY 90	47.53	636	5	-0.75	15-	-1.25	0.25
DAY 120	48.07	642	4	-0.5	15	-1	0.25
DAY 150	47.53	656	4	-0.75	20+	-1.5	0.25
DAY 180	47.27	632	4	-1	15-	-1.5	0.25
EYE	OS	SEX/AGE	M/27	SPEC RX	-1.00-0.25X030		
CL PWR	-1	BC	9.1	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	54.93	0	0	-0.62		-1	
30 MIN	52.8	0.5	0	-0.37	20-	-1	0.25
DAY 1	51.33	24	0	-0.62	20	-1	0.25
DAY 7	47.47	156	1	-0.12	15	-1	0.5
DAY 30	47.13	474	3	-0.37	15	-0.75	0.5
DAY 60	47.07	648	5	-0.62	15-	-1	0.25
DAY 90	47.13	636	5	-0.62	15	-1	0.25
DAY 120	47.93	642	4	-0.37	15	-1	0.5
DAY 150	47.73	656	4	-0.75	20+	-1	0.25
DAY 180	47.53	632	4	-0.87	15-	-1	0.5

HYDROCURVE II

PT ID #	420	INITIALS	DF	CL TYPE	HY CRV II		
EYE	OD	SEX/AGE	F/33	SPEC RX	-3.50-0.75X175		
CL PWR	-3.25	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	57.87	0	0	-1.62		-3.5	
30 MIN	55.4	0.5	0	-1.37	20-	-3.5	0.75
DAY 1	54.87	8	0	-1.5	20-	-3.5	0.75
DAY 7	52.33	90	0	-1.5	20	-3.75	0.5
DAY 30	52.07	374	5	-1.75	20-	-3.5	0.5
DAY 60	49.27	492	4	-1.62	20	-3.75	0.25
DAY 90	52.13	473	6	-1.12	20	-4	0.5
DAY 120	51.93	453	5	-1.25	25+	-3.5	1
DAY 150	51.87	361	5	-1.5	20-	-3.75	1
DAY 180	51.73	418	4	-1.5	20	-3.5	0.75

EYE	OS	SEX/AGE	F/33	SPEC RX	-3.25-0.75X180		
CL PWR	-3.25	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	57.8	0	0	-1.37		-3.75	
30 MIN	55.27	0.5	0	-1.12	20-	-3.5	0.75
DAY 1	54.27	8	0	-1.25	20	-3.75	0.75
DAY 7	52.53	90	0	-1.12	20+	-4	0.5
DAY 30	51.87	382	5	-1	20-	-3.75	0.75
DAY 60	DISCONTINUE--HAIRLINE TEAR LENS EDGE--RESTART						
DAY 90							
DAY 120							
DAY 150							
DAY 180							

HYDROCURVE II

PT ID #	420-B	INITIALS	DF	CL TYPE	HY CRV II		
EYE		SEX/AGE	F/33	SPEC RX			
CL PWR		BC		DIA			
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0							
30 MIN							
DAY 1							
DAY 7							
DAY 30							
DAY 60							
DAY 90							
DAY 120							
DAY 150							
DAY 180							
EYE	OS	SEX/AGE	F/33	SPEC RX	-3.25-0.75X180		
CL PWR	-3.25	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	56.93	0	0	-1.25		-4	
30 MIN	52.27	0.5	0	-1.12	20-	-3.75	0.5
DAY 1	52.6	14	0	-1.12	20-	-3.75	0.5
DAY 7	52.67	91	1	-1.25	20	-3.75	0.5
DAY 30	52.73	368	6	-1.25	20-	-4	0.5
DAY 60	52.73	453	5	-1.25	25+	-3.5	1
DAY 90	DISCONTINUE--HAIRLINE TEAR LENS EDGE						
DAY 120							
DAY 150							
DAY 180							

HYDROCURVE II

PT ID #	426	INITIALS	JG	CL TYPE	HYD CRV II		
EYE	OD	SEX/AGE	F/25	SPEC RX	-6.25-0.75X010		
CL PWR	-6.75	BC	9.1	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	53.47	0	0	-1.5		-7.25	
30 MIN	52.67	0.5	0	-1.5	20-	-7.25	0.75
DAY 1	52.07	24	0	-1.5	20	-7.25	0.75
DAY 7	50.33	134	0	-1.75	20	-7	0.75
DAY 30	49.13	448	3	-1.62	20+	-7	1
DAY 60	49.07	504	3	-1.5	20+	-7.75	0.75
DAY 90	49.33	562	4	-1.5	25+	-7.25	1.75
DAY 120	48.47	652	5	-1.12	25+	-7.5	1.75
DAY 150	49.67	583	4	-1.25	20	-7.25	1.25
DAY 180	50.13	208	4	-1.25	25+	-6.75	1.75
EYE	OS	SEX/AGE	F/25	SPEC RX	-7.00-0.75X180		
CL PWR	-7	BC	9.1	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	53.6	0	0	-2.25		-7.25	
30 MIN	53	0.5	0	-2.37	25-	-7.5	1
DAY 1	52.33	24	0	-2	25-	-7.5	1
DAY 7	49.47	134	0	-2	20-	-7.5	1
DAY 30	47.93	448	3	-1.62	20	-8	1
DAY 60	48.2	504	3	-1.37	20-	-8.5	0.5
DAY 90	49.07	562	4	-1.5	25+	-8.25	0.5
DAY 120	48.73	652	5	-1.75	20-	-8	0.5
DAY 150	49.13	583	4	-1.75	20-	-8	0.25
DAY 180	50.87	208	4	-1.12	20	-7.25	0.75

HYDROCURVE II

PT ID #	429	INITIALS	JH	CL TYPE	HY CRV II		
EYE	OD	SEX/AGE	F/24	SPEC RX	-3.25-0.25X090		
CL PWR	-3.5	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	55.47	0	0	-0.37		-3.75	
30 MIN	54.47	0.5	0	-0.37	20+	-3.75	0.5
DAY 1	52.67	18	0	-0.12	20	-4	0.75
DAY 7	53.73	67	1	-0.12	20	-3.5	1.25
DAY 30	52.27	197	3	0	20	-3.75	1
DAY 60	51.13	273	4	-0.37	20	-4	0.75
DAY 90	51.07	375	4	-0.37	20-	-3.5	0.75
DAY 120	51.47	392	4	-0.25	20+	-4	1
DAY 150	51.07	425	4	-0.5	20	-3.25	1.5
DAY 180	51.67	442	3	-0.37	20	-3.5	1
EYE	OS	SEX/AGE	F/24	SPEC RX	-4.00-0.25X180		
CL PWR	-4.25	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	55.27	0	0	-1		-4.5	
30 MIN	54.33	0.5	0	-0.87	15-	-4.25	0.75
DAY 1	53.93	18	0	-0.87	20	-4.75	0.75
DAY 7	52.73	67	1	-0.87	20+	-4	1
DAY 30	52.07	197	3	-1	20+	-4.75	0.75
DAY 60	51.87	273	4	-0.75	20+	-4.75	0.75
DAY 90	51.93	375	4	-1	20+	-5	0.5
DAY 120	51.47	392	4	-0.62	20+	-5.25	0.75
DAY 150	51.6	425	4	-0.37	20+	-4.5	0.25
DAY 180	51.73	442	3	-0.37	20	-4.25	0.75

HYDROCURVE II

PT ID #	402	INITIALS	DJ	CL TYPE	HY CRV II		
EYE	OD	SEX/AGE	M/22	SPEC RX	-450-0.50X090		
CL PWR	-4.5	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	58.33	0	0	-0.62		-5.25	
30 MIN	53.47	0.5	0	-0.37	20-	-5	0.25
DAY 1	53.07	8	0	-0.75	20-	-5.25	0.25
DAY 7	52.6	73	1	-0.62	20-	-5.5	0.25
DAY 30	52.33	383	3	-0.87	15-	-5.5	0.25
DAY 60	51.13	416	4	-1.12	20	-5.75	0.25
DAY 90	54.53	112	2	-0.62	20	-5	0.25
DAY 120	52.93	96	3	-0.87	20-	-5	0.25
DAY 150	52.93	301	3	-0.87	20	-5.25	0
DAY 180	52.73	398	4	-0.12	20+	-5.25	0.25
EYE	OS	SEX/AGE	M/22	SPEC RX	-4.25-0.25X095		
CL PWR	-4	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	58.2	0	0	-0.12		-4.25	
30 MIN	53.73	0.5	0	-0.25	20	-4.25	0.25
DAY 1	53.13	8	0	-0.5	20	-4.25	0.25
DAY 7	52.87	73	1	-0.5	20	-5.25	0
DAY 30	52.07	383	3	-1	20+	-4.5	0.25
DAY 60	50.13	416	4	-0.5	20	-5	0
DAY 90	53.67	112	2	-0.25	20-	-4	0.5
DAY 120	52.13	96	3	-1	25+	-4	0.5
DAY 150	53.13	301	3	-0.12	20-	-4.25	0
DAY 180	53.07	398	4	-0.62	20	-4	0.5

PT ID #	405	INITIALS	AS	CL TYPE	HY CRV II		
EYE	OD	SEX/AGE	F/27	SPEC RX	-3.25-0.25X005		
CL PWR	-3.25	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	56.33	0	0	-1		-3.25	
30 MIN	54.7	0.5	0	-0.62	20-	-3.25	1
DAY 1	53.73	24	0	-0.75	20-	-3.25	1
DAY 7	51.7	134	1	-0.62	25+	-3	1.25
DAY 30	52.53	511	3	-0.75	20+	-3.25	1.25
DAY 60	49.73	348	4	-1	20-	-3	1.25
DAY 90	49.53	391	5	-1	20	-2.75	1.25
DAY 120	50.87	470	4	-1.12	20	-2.75	1.25
DAY 150	51.47	439	4	-0.62	20	-2.75	1.25
DAY 180	49.53	452	4	-0.87	20	-3	0.75
EYE	OS	SEX/AGE	F/27	SPEC RX	-3.50-0.25X005		
CL PWR	-3.5	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	57.67	0	0	-1		-3	
30 MIN	55.2	0.5	0	-1	20	-3	1.25
DAY 1	54.53	24	0	-1	20	-3	1
DAY 7	52	134	1	-1	20	-3	0.75
DAY 30	52.07	511	3	-1.12	20+	-3.25	0.75
DAY 60	LENS INTOLERANCE--RESTART OS WITH NEW LENS						
DAY 90							
DAY 120							
DAY 150							
DAY 180							

HYDROCURVE II

PT ID #	405-B	INITIALS	AS	CL TYPE	HY CRV II		
EYE		SEX/AGE	F/27	SPEC RX			
CL PWR		BC		DIA			
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0							
30 MIN							
DAY 1							
DAY 7							
DAY 30							
DAY 60							
DAY 90							
DAY 120							
DAY 150							
DAY 180							

EYE	OS	SEX/AGE	F/27	SPEC RX	-3.50-0.25X005		
CL PWR	-350	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	56.13	0	0	-0.75		-3	
30 MIN	53.13	0.5	0	-0.87	20	-3	1.25
DAY 1	52.67	17	0	-0.75	20	-3	1.25
DAY 7	51.67	74	1	-0.75	20	-3.25	1.25
DAY 30	51.33	301	5	-0.87	15-	-3	1.5
DAY 60	51.53	470	4	-0.75	15-	-3	1.5
DAY 90	51.67	439	4	-0.75	15-	-3.25	1.75
DAY 120	50.33	452	4	-0.75	15-	-3	1.5
DAY 150	51.53	382	3	-1.12	20	-3	1
DAY 180	51.27	370	4	-0.75	20	-3	1

HYDROCURVE II

PT ID #	422	INITIALS	RS	CL TYPE	HY CRV II		
EYE	OD	SEX/AGE	M/28	SPEC RX	-3.50-0.50X175		
CL PWR	-3.5	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	54.47	0	0	-0.25		-3.5	
30 MIN	54.13	0.5	0	-0.5	20	-3.75	0.75
DAY 1	53.13	24	0	-0.62	20+	-3.75	0.25
DAY 7	52.53	120	0	-0.5	20	-3.75	1
DAY 30	51.67	468	3	-0.75	25+	-3.75	0.75
DAY 60	51.73	572	4	-0.5	20-	-3.75	0.5
DAY 90	51.67	590	4	-0.62	20-	-3.75	0.5
DAY 120	51.53	580	4	-0.62	20-	-3.75	0.5
DAY 150	50.67	576	3	-0.5	25+	-4	0.5
DAY 180	51.53	386	4	-0.62	20+	-4	0.75
EYE	OS	SEX/AGE	M/28	SPEC RX	-3.75-0.25X180		
CL PWR	-3.75	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	54.33	0	0	-0.5		-3.5	
30 MIN	54.13	0.5	0	-0.12	20	-3.5	0.75
DAY 1	52.93	24	0	-0.25	20	-3.75	0.75
DAY 7	52.27	120	0	-0.37	20-	-3.75	1.25
DAY 30	51.33	468	3	-0.87	25+	-3.75	1.25
DAY 60	52.13	572	4	-0.87	20-	-3.75	0.75
DAY 90	51.87	590	4	-0.12	20	-4	1
DAY 120	51.33	580	4	-0.62	20	-4	0.75
DAY 150	50.53	576	3	-0.5	20-	-4	0.25
DAY 180	51.47	386	4	-0.5	20	-3.75	0.75

HYDROCURVE II

PT ID #	410	INITIALS	DW	CL TYPE	HY CRV II		
EYE	OD	SEX/AGE	F/27	SPEC RX	-4.75-0.25X010		
CL PWR	-4.5	BC	9.1	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	55.6	0	0	-1.5	.	-4.5	
30 MIN	53.07	0.5	0	-1.37	20-	-4.75	0.5
DAY 1	51.27	24	0	-1.37	20	-4.75	0
DAY 7	50.33	107	1	-0.75	15-	-4.5	0.5
DAY 30	48.07	392	3	-1.75	20+	-4.5	0.5
DAY 60	48.47	393	3	-1.25	20	-4.5	0.5
DAY 90	47.67	619	5	-1	20-	-4.5	0.5
DAY 120	47.13	617	4	-1.37	20+	-4.5	0.5
DAY 150	49.33	514	3	-0.75	20+	-4.5	0.75
DAY 180	49.87	544	5	-1.25	20	-4	0.75
EYE	OS	SEX/AGE	F/27	SPEC RX	-3.00-0.50X180		
CL PWR	-3.5	BC	9.1	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	55.93	0	0	-1.37		-3	
30 MIN	52.93	0.5	0	-1.87	20-	-3	0.25
DAY 1	52.07	24	0	-1	20-	-3.5	0.25
DAY 7	48.87	107	1	-0.75	20+	-3.25	0.25
DAY 30	48.6	392	3	-0.75	20	-4	0
DAY 60	48.67	393	3	-1.12	20	-4	0
DAY 90	48.2	619	5	-0.75	20-	-4	0
DAY 120	48.07	617	4	-0.5	20+	-4.25	-0.25
DAY 150	48.67	514	3	-1.12	20	-3.5	0.25
DAY 180	49.47	544	5	-1	20-	-3.5	0.5

HYDROCURVE II

PT ID #	414	INITIALS	NW	CL TYPE	HY CRV II		
EYE	OD	SEX/AGE	F/29	SPEC RX	-350-0.50X015		
CL PWR	-3.5	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	58.4	0	0	-1		-3.25	
30 MIN	53.07	0.5	0	-1	20	-3.5	1.25
DAY 1	52	24	0	-1	20	-3.25	1.25
DAY 7	51.5	144	1	-0.75	20+	-3.25	1.5
DAY 30	51.4	441	3	-0.75	20+	-3.25	1.5
DAY 60	DISCONTINUE OD--TEAR IN CENTER OF LENS-RESTART						
DAY 90							
DAY 120							
DAY 150							
DAY 180							
EYE	OS	SEX/AGE	F/29	SPEC RX	-2.50-0.50X025		
CL PWR	-2.75	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	57.87	0	0	-1.25		-2.5	
30 MIN	55.13	0.5	0	-1	20	-2.5	1.25
DAY 1	53.27	24	0	-1	20	-2.5	1.25
DAY 7	51.6	144	1	-1.12	20+	-2.5	1.25
DAY 30	51.87	441	3	-1.25	20+	-2.5	1.25
DAY 60	50.67	576	5	-1.25	20+	-2.25	1.5
DAY 90	50.67	568	4	-1.12	20	-2.5	1
DAY 120	51.53	626	4	-0.87	20	-2.75	1.5
DAY 150	51.66	607	4	-1	20+	-2.5	1
DAY 180	50.47	574	4	-1.12	20-	-2.5	1.25

HYDROCURVE II

PT ID #	414-B	INITIALS	NW	CL TYPE	HY CRV II		
EYE	OD	SEX/AGE	F/29	SPEC RX	-3.50-0.50X015		
CL PWR	-3.5	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	57	0	0	-1		-3.25	
30 MIN	55.53	0.5	0	-1	15-	-3.25	1.25
DAY 1	53.67	24	0	-1.12	20+	-3	1
DAY 7	52.93	117	1	-1	20+	-3.25	1.25
DAY 30	51.67	447	3	-0.87	20+	-3.25	1.25
DAY 60	51.27	626	4	-1	20+	-3.25	1.25
DAY 90	51.47	607	4	-1	20+	-3.25	1
DAY 120	50.53	574	4	-0.75	20-	-3.25	1.25
DAY 150	51.07	588	4	-1.12	20	-3	1.25
DAY 180	50.67	565	4	-1	20	-3	1.25

EYE		SEX/AGE		SPEC RX			
CL PWR		BC		DIA			
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0							
30 MIN							
DAY 1							
DAY 7							
DAY 30							
DAY 60							
DAY 90							
DAY 120							
DAY 150							
DAY 180							

HYDROCURVE II

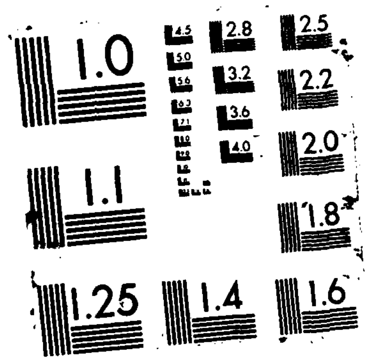
PT ID #	418	INITIALS	TW	CL TYPE	HY CRV II		
EYE	OD	SEX/AGE	F/19	SPEC RX	-1.50-0.25X0115		
CL PWR	-1.5	BC	8.6	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	55.2	0	0	-0.75		-1.25	
30 MIN	55	0.5	0	-0.5	20	-1	1.25
DAY 1	53.67	13	0	-0.62	20	-1	1.25
DAY 7	51.33	95	1	-0.62	15-	-1.25	1
DAY 30	49.67	342	3	-0.12	25+	-1.5	0.75
DAY 60	DISCONTINUE--CENTRAL HAIRLINE TEAR OF LENS-RESTART						
DAY 90							
DAY 120							
DAY 150							
DAY 180							
EYE	OS	SEX/AGE	F/19	SPEC RX	-2.00-0.25X125		
CL PWR	-2	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	55.13	0	0	-0.75		-1.75	
30 MIN	52.47	0.5	0	-0.75	20	-1.5	0.5
DAY 1	51.33	13	0	-1.12	20-	-1.5	0.25
DAY 7	49.53	95	1	-0.87	15-	-1.5	0
DAY 30	48.13	342	3	-0.62	20+	-1.5	0
DAY 60	49.33	288	3	-1	20	-1.5	0.25
DAY 90	50.47	453	5	-0.25	20	-1.5	0.5
DAY 120	49.47	403	5	-0.25	20	-1.75	0.25
DAY 150	49.13	312	4	-0.62	20-	-1.25	0.5
DAY 180	50.06	322	3	-0.5	20-	-1.25	0.5

HYDROCURVE II

PT ID #	418-B	INITIALS	TW	CL TYPE	HY CRV II		
EYE	OD	SEX/AGE	F/19	SPEC RX	-1.50-0.25X115		
CL PWR	-1.5	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	58.33	0	0	-0.75		-1	
30 MIN	53.13	0.5	0	-0.75	20-	-1	0.75
DAY 1	52.67	15	0	-0.62	20	-0.75	0.75
DAY 7	52.33	89	1	-0.5	20	-1	1
DAY 30	53.07	349	4	-0.5	20+	-1	1.25
DAY 60	52.13	403	5	-0.12	20+	-1	0.75
DAY 90	52.07	312	4	-0.5	20-	-0.75	0.75
DAY 120	52.47	322	3	-1	20	-1.25	1
DAY 150	52.27	364	4	-0.75	20	-1.5	1
DAY 180	52.33	388	4	-0.62	20-	-1.25	1.25

EYE		SEX/AGE		SPEC RX			
CL PWR		BC		DIA			
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0							
30 MIN							
DAY 1							
DAY 7							
DAY 30							
DAY 60							
DAY 90							
DAY 120							
DAY 150							
DAY 180							

AD-A185 578 A LONG TERM STUDY OF THE WATER CONTENT CHANGES IN THREE 2/2
TYPES OF HYDROGEL..(U) AIR FORCE INST OF TECH
WRIGHT-PATTERSON AFB OH L G LUEHRS MAY 87
UNCLASSIFIED AFIT/CI/NR-87-99T F/G 20/6 NL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1.25
1.4
1.6

APPENDIX G.

PERMAFLEX LENS

SUBJECT DATA FILES

PERMAFLEX

PT ID #	419	INITIALS	RB	CL TYPE	PERMALFEX		
EYE	OD	SEX/AGE	F/30	SPEC RX	-1		
CL PWR	-1.5	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	72	0	0	-0.62		-1	
30 MIN	68.47	0.5	0	-0.37	20+	-1	0.75
DAY 1	68	24	0	-0.37	15-	-0.75	0.75
DAY 7	68.33	61	0	-0.75	15-	-0.75	0.5
DAY 30	68.13	210	4	-0.62	20+	-0.75	0.75
DAY 60	68.2	230	3	-0.5	20+	-1.25	0.5
DAY 90	68.6	242	4	-0.87	20+	-1	0.5
DAY 120	DISCONTINUE--SUBJECT MOVED OUT OF CITY						
DAY 150							
DAY 180							

EYE	OS	SEX/AGE	F/30	SPEC RX	-1.25		
CL PWR	-1.5	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	73.53	0	0	-0.25		-0.75	
30 MIN	70.13	0.5	0	-0.87	20+	-1	1
DAY 1	69.8	24	0	-0.25	15-	-1	0.75
DAY 7	69.4	61	0	-0.5	15-	-1	0.75
DAY 30	69.87	210	4	-0.37	15-	-1	0.75
DAY 60	69.73	230	3	-0.87	20	-1	1.25
DAY 90	69.87	242	4	-0.37	20+	-1.25	0.75
DAY 120	DISCONTINUE--SUBJECT MOVED OUT OF CITY						
DAY 150							
DAY 180							

PERMAFLEX

PT ID #	427	INITIALS	AC	CL TYPE	PERMAFLEX		
EYE	OD	SEX/AGE	M/31	SPEC RX	-5.25-0.25X180		
CL PWR	-5	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	72.87	0	0	-1.25		-5.25	
30 MIN	68.8	0.5	0	-0.5	20+	-5	1
DAY 1	68.87	24	0	-0.37	20+	-5	0.75
DAY 7	68.8	88	1	-0.5	20+	-5	0.75
DAY 30	68.8	307	3	-0.87	20-	-5.75	0.75
DAY 60	68.67	367	4	-0.62	20-	-5	0.25
DAY 90	69.13	388	4	-0.87	20-	-5.5	0.25
DAY 120	69.07	380	4	-1	20	-5.25	0.75
DAY 150	69.13	406	4	-0.25	20	-5.5	0.5
DAY 180	69	392	4	-0.62	20-	-5.5	0.75

EYE	OS	SEX/AGE	M/31	SPEC RX	-6.25		
CL PWR	-6	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	73.13	0	0	-0.37		-6.5	
30 MIN	68.53	0.5	0	-0.37	20	-6.5	0.75
DAY 1	68.33	24	0	-0.5	20+	-6.25	1.25
DAY 7	68.87	88	1	-0.37	20+	-6	1.5
DAY 30	68.8	307	3	-0.75	20	-6	1.25
DAY 60	68.8	367	4	-1.25	20	-5.75	1.75
DAY 90	69.07	388	4	-0.37	20	-6	1.25
DAY 120	DISCONTINUE--LENS EDGE NICK						
DAY 150							
DAY 180							

PERMAFLEX

PT ID #	427-B	INITIALS	AC	CL TYPE	PERMAFLEX		
EYE		SEX/AGE		SPEC RX			
CL PWR		BC		DIA			
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0							
30 MIN							
DAY 1							
DAY 7							
DAY 30							
DAY 60							
DAY 90							
DAY 120							
DAY 150							
DAY 180							

EYE	OS	SEX/AGE	M/31	SPEC RX	-6.25		
CL PWR	-6	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	72.67	0	0	-0.37		-6.25	
30 MIN	69.87	0.5	0	-0.12	20-	-6	1
DAY 1	69.73	13	0	-0.25	20-	-6.25	0.75
DAY 7	69.6	74	1	-0.5	20	-6	0.75
DAY 30	69.47	293	3	-0.62	20	-5.75	0.75
DAY 60	69.53	406	4	-0.87	20	-6.25	0.75
DAY 90	69.47	392	4	-0.62	20	-6.25	1.25
DAY 120	69.6	376	3	-0.75	20	-6.25	0.75
DAY 150	69.53	384	4	-0.75	20-	-6.25	1
DAY 180	69.6	389	4	-0.75	20-	-6.25	0.75

PERMAFLEX

PT ID #	415	INITIALS	MAH	CL TYPE	PERMAFLEX		
EYE	OD	SEX/AGE	F/27	SPEC RX	-3.75-0.25X090		
CL PWR	-3.75	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	73.87	0	0	-1.75		-4	
30 MIN	69.93	0.5	0	-1.37	20-	-3.25	1
DAY 1	69.6	14	0	-1.37	20	-3.5	0.75
DAY 7	69.8	90	0	-0.75	20+	-3.5	1.25
DAY 30	69.4	282	3	-1.37	20+	-3.25	1.5
DAY 60	70.07	387	4	-1.75	20+	-3	1.25
DAY 90	DISCONTINUE--LENS EDGE NICK						
DAY 120							
DAY 150							
DAY 180							

EYE	OS	SEX/AGE	F/27	SPEC RX	-4.25-0.50X135		
CL PWR	-3.75	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	73.67	0	0	-1.87		-4	
30 MIN	69.53	0.5	0	-1.75	20+	-4	0.5
DAY 1	69.5	14	0	-2	20	-4	0.75
DAY 7	69.07	90	0	-1.37	20	-4.25	0.75
DAY 30	69.2	282	3	-1.37	20	-3.75	0.75
DAY 60	69.13	387	4	-1.37	20+	-3.75	0.75
DAY 90	68.2	366	3	-1.37	20+	-4	0.5
DAY 120	69.07	307	3	-1.37	20-	-3.75	0.75
DAY 150	69.07	325	4	-1.62	20-	-3.75	0.75
DAY 180	68.93	287	4	-1.25	20	-3.75	0.75

PERMAFLEX

PT ID #	415-B	INITIALS	MAH	CL TYPE	PERMAFLEX		
EYE	OD	SEX/AGE	F/27	SPEC RX	-3.75-0.25X090		
CL PWR	-3.75	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	73.33	0	0	-1.5		-3	
30 MIN	71.07	0.5	0	-1	20	-3	1.5
DAY 1	69.93	11	0	-1.37	20	-3.25	1.25
DAY 7	69.93	65	1	-1.25	20	-3	1.25
DAY 30	70	249	3	-1.37	20	-3.25	1.25
DAY 60	69.93	287	4	-1.25	20	-3.25	1.5
DAY 90	69.87	232	6	-1.12	20	-3	1
DAY 120	69.93	317	4	-1.62	20	-3.5	1.25
DAY 150	70	306	4	-1.37	20	-3	1
DAY 180	70	324	3	-1.5	20	-3.25	1.5

EYE		SEX/AGE		SPEC RX			
CL PWR		BC		DIA			
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0							
30 MIN							
DAY 1							
DAY 7							
DAY 30							
DAY 60							
DAY 90							
DAY 120							
DAY 150							
DAY 180							

PERMAFLEX

PT ID #	421	INITIALS	AL	CL TYPE	PERMAFLEX		
EYE	OD	SEX/AGE	M/27	SPEC RX	-2.00-0.25X005		
CL PWR	-2	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	73.67	0	0	-0.87		-2.75	
30 MIN	69.87	0.5	0	-1.37	15	-2.5	0.5
DAY 1	69.73	18	0	-1	15	-2.5	0.25
DAY 7	69.13	150	0	-1.25	15	-2.25	0.5
DAY 30	69.6	358	3	-1.12	15	-2.5	0.25
DAY 60	69.53	453	3	-1.25	15-	-2.5	0.5
DAY 90	69.67	544	5	-1.12	20+	-2.75	0.25
DAY 120	69.53	473	4	-1.12	15-	-2.75	0.25
DAY 150	69.4	472	4	-2.25	20+	-2.5	0.25
DAY 180	69.4	456	4	-2.62	20-	-2.75	0

EYE	OS	SEX/AGE	M/27	SPEC RX	-1.50-0.25X180		
CL PWR	-1.5	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	73.93	0	0	-1.37		-2	
30 MIN	70.53	0.5	0	-1.25	15	-1.75	0.25
DAY 1	70.13	18	0	-1.25	15-	-2.25	0.5
DAY 7	70.27	150	0	-1	15-	-2	0.25
DAY 30	70.13	358	3	-1.37	20	-2.25	0
DAY 60	70.13	453	3	-1.37	20	-2.25	0
DAY 90	70.93	544	5	-1.37	20	-2.25	0
DAY 120	70.93	473	4	-1.25	20	-2.25	0
DAY 150	71	472	4	-1.37	20	-2.5	-0.25
DAY 180	71	456	4	-1.12	20-	-2.5	-0.25

PERMAFLEX

PT ID #	431	INITIALS	SL	CL TYPE	PERMAFLEX		
EYE	OD	SEX/AGE	F/36	SPEC RX	-1.75-0.50X175		
CL PWR	-2	BC	8.9	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	71.93	0	0	-1		-1.5	
30 MIN	68.53	0.5	0	-0.75	20+	-1.25	1.25
DAY 1	68.73	11	0	-0.87	20+	-1.5	0.75
DAY 7	68.13	61	0	-1	20+	-1.25	1.25
DAY 30	68.13	248	3	-0.62	20+	-1.5	1.25
DAY 60	67.93	345	4	-0.75	20	-1.5	1.25
DAY 90	67.8	360	4	-0.5	20	-1.5	0.75
DAY 120	68.07	348	4	-1	20	-1.75	1
DAY 150	67.87	337	3	-0.5	20	-1.25	1.25
DAY 180	68.13	351	4	-0.75	20	-1.5	1.25
EYE	OS	SEX/AGE	F/36	SPEC RX	-2.00-0.50X005		
CL PWR	-2.25	BC	8.9	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	71.47	0	0	-0.87		-1.75	
30 MIN	68.13	0.5	0	-0.75	20+	-1.75	1
DAY 1	68.33	11	0	-0.75	15-	-2	1
DAY 7	68	61	0	-0.62	20+	-1.75	1
DAY 30	68	248	3	-0.37	20+	-1.75	0.75
DAY 60	67.87	345	4	-0.75	20+	-1.75	0.75
DAY 90	67.93	360	4	-1	20+	-1.75	1
DAY 120	68.07	348	4	-0.87	20	-2	0.75
DAY 150	67.87	337	3	-0.62	20	-1.75	1
DAY 180	68.27	351	4	-0.75	20	-1.75	1

PFRMAFLEX

PT ID #	430	INITIALS	NO	CL TYPE	PERMAFLEX		
EYE	OD	SEX/AGE	F/35	SPEC RX	-3.00-0.25X015		
CL PWR	-3.25	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	72	0	0	-0.37		-3.25	
30 MIN	68.33	0.5	0	-0.37	20+	-3.25	0.75
DAY 1	69.13	12	0	-0.62	20+	-3.5	0.25
DAY 7	68.33	91	0	-0.75	15-	-3.5	0.5
DAY 30	68.2	291	3	-0.5	20+	-3.5	0.5
DAY 60	DISCONTINUE--LENS EDGE NICK--RESTART						
DAY 90							
DAY 120							
DAY 150							
DAY 180							
EYE	OS	SEX/AGE	F/35	SPEC RX	-3.25-0.25X175		
CL PWR	-3.25	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	73.2	0	0	-0.12		-2.75	
30 MIN	69	0.5	0	-0.62	20+	-2.75	1
DAY 1	69.13	12	0	-0.5	20	-3	0.75
DAY 7	68.8	91	0	-0.5	15-	-3	0.75
DAY 30	68.86	291	3	-0.12	15-	-3	1
DAY 60	DISCONTINUE--LENS EDGE NICK--RESTART						
DAY 90							
DAY 120							
DAY 150							
DAY 180							

PERMAFLEX

PT ID #	430-B	INITIALS	NO	CL TYPE	PERMAFLEX		
EYE	OD	SEX/AGE	F/35	SPEC RX	-3.00-0.25X015		
CL PWR	-3.25	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	73.73	0	0	0		-3.5	
30 MIN	70.47	0.5	0	-0.62	20	-3.25	0.5
DAY 1	70.27	13	0	-0.37	20	-3.5	0.5
DAY 7	70.13	80	1	-0.5	20+	-3.25	0.25
DAY 30	69.93	305	3	-0.12	15-	-3.5	0.5
DAY 60	70.07	371	4	-0.37	15-	-3.5	0.25
DAY 90	69.93	409	4	-0.5	20+	-3.5	0.5
DAY 120	70.13	389	4	-0.5	20	-3.25	0.25
DAY 150	70	424	5	-0.5	20+	-3.25	0.25
DAY 180	70.07	402	4	-0.37	20+	-3.5	0.5

EYE	OS	SEX/AGE	F/35	SPEC RX	-3.25-0.25X175		
CL PWR	-3.25	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	73.07	0	0	-0.12		-3.5	
30 MIN	69.73	0.5	0	-0.37	20	-3.25	0.5
DAY 1	69.87	13	0	-0.5	20	-3	0.75
DAY 7	69.8	80	1	-0.37	20+	-3.25	0.5
DAY 30	69.93	305	3	-0.5	15-	-3	0.75
DAY 60	69.67	371	4	-0.37	15-	-3.25	0.75
DAY 90	69.53	409	4	-0.12	15-	-3.25	0.75
DAY 120	69.93	389	4	-0.37	15-	-3.25	1
DAY 150	69.93	424	5	-0.37	15-	-3.25	0.5
DAY 180	69.93	402	4	-0.37	20+	-3.25	0.75

PERMAFLEX

PT ID #	417	INITIALS	AT	CL TYPE	PERMAFLEX		
EYE	OD	SEX/AGE	F/35	SPEC RX	-7.25 sph		
CL PWR	-7	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	71.23	0	0	-1.12		-8	
30 MIN	67.8	0.5	0	-0.75	20	-7.75	0.25
DAY 1	68.6	11	0	-0.62	20	-8	0
DAY 7	67.93	78	1	-0.62	15-	-7.5	0.75
DAY 30	68.4	309	3	-0.75	20+	-7.75	0.25
DAY 60	68.13	378	3	-0.75	15-	-7.25	0.5
DAY 90	68.33	391	4	-0.37	20	-7.75	0.25
DAY 120	68.2	431	4	-0.5	20	-7.5	0.25
DAY 150	68.13	359	3	-0.62	20	-7.25	0
DAY 180	68.2	408	4	-0.5	20	-7.5	0.25
EYE	OS	SEX/AGE	F/35	SPEC RX	-7.00-0.50X015		
CL PWR	-6.5	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	72	0	0	-0.75		-7.5	
30 MIN	67.93	0.5	0	-0.87	15-	-7.25	0.25
DAY 1	68.27	11	0	-0.5	15-	-7.25	0.75
DAY 7	68	78	1	-0.62	15	-7	0.75
DAY 30	68	309	3	-0.75	15-	-7	0.75
DAY 60	68.07	378	3	-0.87	15-	-7	0.5
DAY 90	68.13	391	4	-0.75	15-	-7.25	1
DAY 120	68.07	431	4	-0.87	15-	-7	1
DAY 150	67.93	359	3	-0.75	20+	-6.75	1.25
DAY 180	68.07	408	4	-0.75	20+	-6.75	1

PERMAFLEX

PT ID #	411	INITIALS	CW	CL TYPE	PERMAFLEX		
EYE	OD	SEX/AGE	F/28	SPEC RX	-1.5		
CL PWR	-1.25	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	73.4	0	0	-0.5		-1	
30 MIN	71.3	0.5	0	-0.62	15-	-1	0.5
DAY 1	69.7	24	0	-0.62	15-	-1	0.75
DAY 7	70.13	84	0	-0.62	15-	-1	0.25
DAY 30	68.87	258	3	-0.62	15-	-1	0.5
DAY 60	68.93	162	3	-0.75	15-	-1	0.5
DAY 90	69.73	423	4	-0.62	20+	-1.25	0.5
DAY 120	69.67	349	3	-0.62	15-	-0.75	0.5
DAY 150	69.53	336	4	-0.5	20+	-1	0.5
DAY 180	69.67	352	3	-0.5	20+	-0.75	0.75

EYE	OS	SEX/AGE	F/28	SPEC RX	-2.25 SPH		
CL PWR	-2.25	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	73.8	0	0	-0.75		-2	
30 MIN	70.7	0.5	0	-0.87	15-	-2.25	1
DAY 1	70.9	24	0	-0.62	15-	-2.25	1
DAY 7	70.93	84	0	-0.75	15-	-2	1
DAY 30	70.53	258	3	-0.87	15-	-2.25	0.75
DAY 60	70.67	162	3	-0.62	15-	-2.25	1.25
DAY 90	70.47	423	4	-0.5	20+	-2	1
DAY 120	70.47	349	3	-0.62	20	-2	1
DAY 150	70.93	336	4	-0.75	15-	-2	1.25
DAY 180	70.93	352	3	-0.87	20+	-1.75	1

PERMAFLEX

PT ID #	413	INITIALS	TW	CL TYPE	PERMAFLEX		
EYE	OD	SEX/AGE	M/25	SPEC RX	-1.75-0.25X080		
CL PWR	-1.75	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	71.8	0	0	-0.37		-1.75	
30 MIN	68.87	0.5	0	-0.37	20+	-1.5	0.75
DAY 1	68.73	24	0	-0.12	15-	-1.5	0.75
DAY 7	68.87	112	1	-0.25	15-	-1.5	1
DAY 30	69.2	252	3	-0.37	20+	-1.75	0.75
DAY 60	STOP STUDY--CORNEAL INFILTRATES; LENS INTOLERANCE						
DAY 90							
DAY 120							
DAY 150							
DAY 180							

EYE	OS	SEX/AGE	M/25	SPEC RX	-1.75-0.50X090		
CL PWR	-1.75	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	72.87	0	0	-0.25		-1.75	
30 MIN	69.3	0.5	0	-0.62	20+	-1.5	0.75
DAY 1	69.4	24	0	-0.37	15-	-1.5	0.75
DAY 7	69.7	112	1	-0.25	20	-1.75	1
DAY 30	68.73	252	3	-0.37	20	-1.75	0.75
DAY 60	STOP STUDY--CORNEAL INFILTRATES; LENS INTOLERANCE						
DAY 90							
DAY 120							
DAY 150							
DAY 180							

APPENDIX H.

CONTROL LENS DATA

AND

STATISTICS

CSI-T CONTROL

PT ID #	CONTROL	INITIALS		CL TYPE	CSI-T		
EYE		SEX/AGE		SPEC RX			
CL PWR	-2.5	BC	8.9	DIA	13.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	43						
30 MIN	42.87						
DAY 1	42.67						
DAY 7	42.93						
DAY 30	43.13						
DAY 60	43.27						
DAY 90	43.07						
DAY 120	42.93						
DAY 150	42.87						
DAY 180	42.87						
EYE		SEX/AGE		SPEC RX			
CL PWR	-3.5	BC	8.9	DIA	14.8		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	43.6						
30 MIN	43.47						
DAY 1	43.33						
DAY 7	43.33						
DAY 30	43.13						
DAY 60	43.2						
DAY 90	43.07						
DAY 120	43.13						
DAY 150	43.07						
DAY 180	43.07						

CSI-T CONTROL AND RELIABILITY/VALIDITY

-2.5 CONTROL LENS	-3.5 CONTROL LENS	MEAN		RELIABILITY & VALIDITY -2.5 LENS	-3.5 LENS	
43	43.6	43.3		56.8	55.6	
42.87	43.47	43.17		56.8	56.2	
42.67	43.33	43		56	56.2	
42.93	43.33	43.13		57.2	56.4	
43.13	43.13	43.13		57	56.8	
43.27	43.2	43.235		57.4	56.6	
43.07	43.07	43.07		57.2	56.4	
42.93	43.13	43.03		57.4	56.6	
42.87	43.07	42.97		57.2	56.8	
42.87	43.07	42.97		57	56.4	MEAN
42.961	43.24	MEAN		43	43.6	%HOH

HYDROCURVE II--CONTROL

PT ID #	CONTROL	INITIALS		CL TYPE	HYD CRV II		
EYE		SEX/AGE		SPEC RX			
CL PWR	-2.5	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	55.82						
30 MIN	55.86						
DAY 1	55.6						
DAY 7	55.53						
DAY 30	54.13						
DAY 60	55.07						
DAY 90	54.93						
DAY 120	54.87						
DAY 150	54.13						
DAY 180	54.07						

EYE		SEX/AGE		SPEC RX			
CL PWR	-3.5	BC	8.8	DIA	14.5		
XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	55.33						
30 MIN	55.73						
DAY 1	55.67						
DAY 7	55.33						
DAY 30	55.93						
DAY 60	54.07						
DAY 90	54.47						
DAY 120	54.33						
DAY 150	54.33						
DAY 180	54.07						

HYDROCURVE II--CONTROL AND RELIABILITY/VALIDITY

				RELIABILITY &		
-2.5	-3.5			VALIDITY		
CONTROL	CONTROL			-2.5	-3.5	
LENS	LENS	MEAN		LENS	LENS	
55.82	55.33	55.575		43.8	44.6	
55.86	55.73	55.795		43.2	44.6	
55.6	55.67	55.635		43.8	44.8	
55.53	55.33	55.43		44.6	43.8	
54.13	55.93	55.03		44.2	44.2	
55.07	54.07	54.57		44.4	44.4	
54.93	54.47	54.7		44.6	45.4	
54.87	54.33	54.6		44.4	45	
54.13	54.33	54.23		44.6	45.2	
54.07	54.07	54.07		44.178	44.667	MEAN
55.001	54.926	MEAN		55.82	55.33	% HOH

PERMAFLEX--CONTROL

PT ID #	CONTROL	INITIALS		CL TYPE	PERMAFLEX		
EYE		SEX/AGE		SPEC RX			
CL PWR	-2.5	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CL W	EXT CLN	Δ K	VA W/ CL	SPH EQ	OR SPH EQ
DAY 0	72.67						
30 MIN	72.87						
DAY 1	72.67						
DAY 7	72.73						
DAY 30	72.53						
DAY 60	72.67						
DAY 90	72.33						
DAY 120	72.53						
DAY 150	72.73						
DAY 180	72.93						
EYE		SEX/AGE		SPEC RX			
CL PWR	-3.5	BC	8.7	DIA	14.4		
XXXXXXXXX	XXXXXXXXX	XXXXXXXX	XXXXXXXXX	XXXXXXXXX	XXXXXXXX	XXXXXXXXX	XXXXXXXX
	% HOH	HRS CW	EXT CLN	Δ K	VA CL	SPH EQ	OR SPH EQ
DAY 0	72.53						
30 MIN	72.73						
DAY 1	72.47						
DAY 7	72.8						
DAY 30	72.87						
DAY 60	72.53						
DAY 90	72.87						
DAY 120	73						
DAY 150	72.33						
DAY 180	72.93						

PERMAFLEX--CONTROL AND RELIABILITY/VALIDITY

-3.5	-2.5			RELIABILITY &		
CONTROL	CONTROL			VALIDITY		
LENS	LENS	MEAN		-3.5	-2.5	
72.53	72.69	72.61		LENS	LENS	
72.73	72.87	72.8		27.6	27.4	
72.47	72.67	72.57		27.4	27.4	
72.8	72.73	72.765		27.8	27.2	
72.87	72.53	72.7		27.4	27	
72.53	72.67	72.6		27.6	27.2	
72.87	72.33	72.6		27.8	27.2	
73	72.53	72.765		27.4	27.4	
72.33	72.73	72.53		27.2	27.4	
72.93	72.93	72.93		27	27.6	
				27.467	27.311111	MEAN
				72.53	72.69	% HOH

	CONTROL	DAY 0	30 MIN	DAY 1	DAY 7	DAY 30	DAY 60	DAY 90	DAY 120	DAY 150	DAY 180
1	CSIT -2.50	43.00	42.87	42.67	42.93	43.13	43.27	43.07	42.93	42.87	42.87
2	CSIT -3.50	43.60	43.47	43.33	43.33	43.13	43.20	43.07	43.13	43.07	43.07
3	HC II -2.50	55.82	55.86	55.60	55.53	54.13	55.07	54.93	54.87	54.13	54.07
4	HC II -3.50	55.33	55.73	55.67	55.33	55.93	54.07	54.47	54.33	54.33	54.07
5	PERM -2.50	72.53	72.73	72.47	72.80	72.87	72.53	72.87	73.00	72.33	72.93
6	PERM -3.50	72.69	72.87	72.67	72.73	72.53	72.67	72.33	72.53	72.73	72.93

CSIT CONTROL LENS STATS

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
Between subjects	1	.389	.389	12.508	.0024
Within subjects	18	.56	.031		
treatments	9	.229	.025	.692	.704
residual	9	.331	.037		
Total	19	.949			

Reliability Estimates for- All treatments: .92 Single Treatment: .535

Note: 4 cases deleted with missing values.

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
DAY 0	2	43.3	.424	.3
30 MIN	2	43.17	.424	.3
DAY 1	2	43	.467	.33
DAY 7	2	43.13	.283	.2
DAY 30	2	43.13	0	0

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
DAY 60	2	43.235	.049	.035
DAY 90	2	43.07	0	0
DAY 120	2	43.03	.141	.1
DAY 150	2	42.97	.141	.1
DAY 180	2	42.97	.141	.1

CSIT CONTROL LENS STATS

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 0 vs. 30 MIN	.13	.352	.051	.678
DAY 0 vs. DAY 1	.3	.352	.272	1.564
DAY 0 vs. DAY 7	.17	.352	.087	.886
DAY 0 vs. DAY 30	.17	.352	.087	.886
DAY 0 vs. DAY 60	.065	.352	.013	.339

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 0 vs. DAY 90	.23	.352	.16	1.199
DAY 0 vs. DAY 120	.27	.352	.22	1.408
DAY 0 vs. DAY 150	.33	.352	.329	1.721
DAY 0 vs. DAY 180	.33	.352	.329	1.721
30 MIN vs. DAY 1	.17	.352	.087	.886

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
30 MIN vs. DAY 7	.04	.352	.005	.209
30 MIN vs. DAY 30	.04	.352	.005	.209
30 MIN vs. DAY 60	-.065	.352	.013	.339
30 MIN vs. DAY 90	.1	.352	.03	.521
30 MIN vs. DAY 120	.14	.352	.059	.73

CSIT CONTROL LENS STATS

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
30 MIN vs. DAY 150	.2	.352	.121	1.043
30 MIN vs. DAY 180	.2	.352	.121	1.043
DAY 1 vs. DAY 7	-.13	.352	.051	.678
DAY 1 vs. DAY 30	-.13	.352	.051	.678
DAY 1 vs. DAY 60	-.235	.352	.167	1.225

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 1 vs. DAY 90	-.07	.352	.015	.365
DAY 1 vs. DAY 120	-.03	.352	.003	.156
DAY 1 vs. DAY 150	.03	.352	.003	.156
DAY 1 vs. DAY 180	.03	.352	.003	.156
DAY 7 vs. DAY 30	-3.469E-18	.352	3.636E-35	1.809E-17

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 7 vs. DAY 60	-.105	.352	.033	.547
DAY 7 vs. DAY 90	.06	.352	.011	.313
DAY 7 vs. DAY 120	.1	.352	.03	.521
DAY 7 vs. DAY 150	.16	.352	.077	.834
DAY 7 vs. DAY 180	.16	.352	.077	.834

CSIT CONTROL LENS STATS

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 30 vs. DAY 60	-.105	.352	.033	.547
DAY 30 vs. DAY 90	.06	.352	.011	.313
DAY 30 vs. DAY 120	.1	.352	.03	.521
DAY 30 vs. DAY 150	.16	.352	.077	.834
DAY 30 vs. DAY 180	.16	.352	.077	.834

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 60 vs. DAY 90	.165	.352	.082	.86
DAY 60 vs. DAY 120	.205	.352	.127	1.069
DAY 60 vs. DAY 150	.265	.352	.212	1.382
DAY 60 vs. DAY 180	.265	.352	.212	1.382
DAY 90 vs. DAY 120	.04	.352	.005	.209

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 90 vs. DAY 150	.1	.352	.03	.521
DAY 90 vs. DAY 180	.1	.352	.03	.521
DAY 120 vs. DAY 150	.06	.352	.011	.313
DAY 120 vs. DAY 180	.06	.352	.011	.313
DAY 150 vs. DAY 180	0	.352	0	0

HYDROCURVE II CONTROL LENS STATS

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
Between subjects	1	.028	.028	.054	.8189
Within subjects	18	9.377	.521		
treatments	9	6.862	.762	2.729	.0754
residual	9	2.514	.279		
Total	19	9.405			

Reliability Estimates for- All treatments: -17.52 Single Treatment: -.104

Note: 4 cases deleted with missing values.

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
DAY 0	2	55.575	.346	.245
30 MIN	2	55.795	.092	.065
DAY 1	2	55.635	.049	.035
DAY 7	2	55.43	.141	.1
DAY 30	2	55.03	1.273	.9

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
DAY 60	2	54.57	.707	.5
DAY 90	2	54.7	.325	.23
DAY 120	2	54.6	.382	.27
DAY 150	2	54.23	.141	.1
DAY 180	2	54.07	0	0

HYDROCURVE II CONTROL LENS STATS

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 0 vs. 30 MIN	-.22	.969	.019	.416
DAY 0 vs. DAY 1	-.06	.969	.001	.114
DAY 0 vs. DAY 7	.145	.969	.008	.274
DAY 0 vs. DAY 30	.545	.969	.118	1.031
DAY 0 vs. DAY 60	1.005	.969*	.402	1.901

* Significant at 90%

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 0 vs. DAY 90	.875	.969	.304	1.655
DAY 0 vs. DAY 120	.975	.969*	.378	1.845
DAY 0 vs. DAY 150	1.345	.969*	.719	2.545
DAY 0 vs. DAY 180	1.505	.969*	.901	2.847
30 MIN vs. DAY 1	.16	.969	.01	.303

* Significant at 90%

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
30 MIN vs. DAY 7	.365	.969	.053	.691
30 MIN vs. DAY 30	.765	.969	.233	1.447
30 MIN vs. DAY 60	1.225	.969*	.597	2.318
30 MIN vs. DAY 90	1.095	.969*	.477	2.072
30 MIN vs. DAY 120	1.195	.969*	.568	2.261

* Significant at 90%

HYDROCURVE II CONTROL LENS STATS

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
30 MIN vs. DAY 150	1.565	.969*	.974	2.961
30 MIN vs. DAY 180	1.725	.969*	1.183	3.264
DAY 1 vs. DAY 7	.205	.969	.017	.388
DAY 1 vs. DAY 30	.605	.969	.146	1.145
DAY 1 vs. DAY 60	1.065	.969*	.451	2.015

* Significant at 90%

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 1 vs. DAY 90	.935	.969	.348	1.769
DAY 1 vs. DAY 120	1.035	.969*	.426	1.958
DAY 1 vs. DAY 150	1.405	.969*	.785	2.658
DAY 1 vs. DAY 180	1.565	.969*	.974	2.961
DAY 7 vs. DAY 30	.4	.969	.064	.757

* Significant at 90%

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 7 vs. DAY 60	.86	.969	.294	1.627
DAY 7 vs. DAY 90	.73	.969	.212	1.381
DAY 7 vs. DAY 120	.83	.969	.274	1.57
DAY 7 vs. DAY 150	1.2	.969*	.573	2.27
DAY 7 vs. DAY 180	1.36	.969*	.736	2.573

* Significant at 90%

HYDROCURVE II CONTROL LENS STATS

One Factor ANOVA-Repeated Measures for $X_1 \dots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 30 vs. DAY 60	.46	.969	.084	.87
DAY 30 vs. DAY 90	.33	.969	.043	.624
DAY 30 vs. DAY 120	.43	.969	.074	.814
DAY 30 vs. DAY 150	.8	.969	.255	1.514
DAY 30 vs. DAY 180	.96	.969	.367	1.816

One Factor ANOVA-Repeated Measures for $X_1 \dots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 60 vs. DAY 90	-.13	.969	.007	.246
DAY 60 vs. DAY 120	-.03	.969	3.579E-4	.057
DAY 60 vs. DAY 150	.34	.969	.046	.643
DAY 60 vs. DAY 180	.5	.969	.099	.946
DAY 90 vs. DAY 120	.1	.969	.004	.189

One Factor ANOVA-Repeated Measures for $X_1 \dots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 90 vs. DAY 150	.47	.969	.088	.889
DAY 90 vs. DAY 180	.63	.969	.158	1.192
DAY 120 vs. DAY 150	.37	.969	.054	.7
DAY 120 vs. DAY 180	.53	.969	.112	1.003
DAY 150 vs. DAY 180	.16	.969	.01	.303

PERMAFLEX CONTROL LENS STATS

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
Between subjects	1	.007	.007	.178	.6778
Within subjects	18	.729	.04		
treatments	9	.287	.032	.65	.7344
residual	9	.442	.049		
Total	19	.736			

Reliability Estimates for- All treatments: -4.608 Single Treatment: -.09

Note: 4 cases deleted with missing values.

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
DAY 0	2	72.61	.113	.08
30 MIN	2	72.8	.099	.07
DAY 1	2	72.57	.141	.1
DAY 7	2	72.765	.049	.035
DAY 30	2	72.7	.24	.17

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
DAY 60	2	72.6	.099	.07
DAY 90	2	72.6	.382	.27
DAY 120	2	72.765	.332	.235
DAY 150	2	72.53	.283	.2
DAY 180	2	72.93	0	0

PERMAFLEX CONTROL LENS STATS

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 0 vs. 30 MIN	-.19	.406	.082	.858
DAY 0 vs. DAY 1	.04	.406	.004	.181
DAY 0 vs. DAY 7	-.155	.406	.054	.7
DAY 0 vs. DAY 30	-.09	.406	.018	.406
DAY 0 vs. DAY 60	.01	.406	2.264E-4	.045

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 0 vs. DAY 90	.01	.406	2.264E-4	.045
DAY 0 vs. DAY 120	-.155	.406	.054	.7
DAY 0 vs. DAY 150	.08	.406	.014	.361
DAY 0 vs. DAY 180	-.32	.406	.232	1.444
30 MIN vs. DAY 1	.23	.406	.12	1.038

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
30 MIN vs. DAY 7	.035	.406	.003	.158
30 MIN vs. DAY 30	.1	.406	.023	.451
30 MIN vs. DAY 60	.2	.406	.091	.903
30 MIN vs. DAY 90	.2	.406	.091	.903
30 MIN vs. DAY 120	.035	.406	.003	.158

PERMAFLEX CONTROL LENS STATS

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
30 MIN vs. DAY 150	.27	.406	.165	1.219
30 MIN vs. DAY 180	-.13	.406	.038	.587
DAY 1 vs. DAY 7	-.195	.406	.086	.88
DAY 1 vs. DAY 30	-.13	.406	.038	.587
DAY 1 vs. DAY 60	-.03	.406	.002	.135

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 1 vs. DAY 90	-.03	.406	.002	.135
DAY 1 vs. DAY 120	-.195	.406	.086	.88
DAY 1 vs. DAY 150	.04	.406	.004	.181
DAY 1 vs. DAY 180	-.36	.406	.293	1.625
DAY 7 vs. DAY 30	.065	.406	.01	.293

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 7 vs. DAY 60	.165	.406	.062	.745
DAY 7 vs. DAY 90	.165	.406	.062	.745
DAY 7 vs. DAY 120	0	.406	0	0
DAY 7 vs. DAY 150	.235	.406	.125	1.061
DAY 7 vs. DAY 180	-.165	.406	.062	.745

PERMAFLEX CONTROL LENS STATS

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 30 vs. DAY 60	.1	.406	.023	.451
DAY 30 vs. DAY 90	.1	.406	.023	.451
DAY 30 vs. DAY 120	-.065	.406	.01	.293
DAY 30 vs. DAY 150	.17	.406	.065	.767
DAY 30 vs. DAY 180	-.23	.406	.12	1.038

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 60 vs. DAY 90	6.939E-18	.406	1.090E-34	3.132E-17
DAY 60 vs. DAY 120	-.165	.406	.062	.745
DAY 60 vs. DAY 150	.07	.406	.011	.316
DAY 60 vs. DAY 180	-.33	.406	.247	1.49
DAY 90 vs. DAY 120	-.165	.406	.062	.745

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 90 vs. DAY 150	.07	.406	.011	.316
DAY 90 vs. DAY 180	-.33	.406	.247	1.49
DAY 120 vs. DAY 150	.235	.406	.125	1.061
DAY 120 vs. DAY 180	-.165	.406	.062	.745
DAY 150 vs. DAY 180	-.4	.406	.362	1.806

APPENDIX I.

CSI-T LENS

WATER CONTENT STATISTICS

	SUBJECTS	DAY 0	30 MIN	DAY 1	DAY 7	DAY 30	DAY 60	DAY 90	DAY 120	DAY 150	DAY 180
1	SC-404	43.27	43.07	42.13	42.93	42.67	41.53	42.67	42.73	43.07	43.00
2	SC-404	43.73	42.93	42.33	42.73	42.73	41.73	41.87	42.53	42.67	42.87
3	RC-423B	44.07	43.13	43.07	43.47	43.27	43.13	42.93	42.87	43.07	43.00
4	RC-423	42.47	42.33	43.07	42.47	42.33	42.27	42.20	42.13	41.93	42.13
5	EC-433	43.33	43.07	42.87	42.87	42.53	42.67	42.87	42.93	43.07	42.73
6	EC-433	43.73	43.27	43.27	43.33	43.47	43.07	43.13	43.13	43.13	43.13
7	JED-434	43.87	42.93	42.87	42.67	42.93	42.67	42.73	43.13	43.07	43.00
8	JED-434	43.67	42.93	42.93	42.73	42.93	42.33	42.40	42.53	42.73	42.67
9	MG-401	43.80	43.27	43.13	43.10	42.80	42.67	43.00	43.07	42.93	42.87
10	MG-401	44.00	43.87	44.07	43.80	43.20	42.53	43.00	43.07	43.13	43.13
11	LH-432	43.07	42.27	42.27	42.67	42.93	42.93	42.87	43.07	43.13	43.33
12	LH-432	43.13	42.87	42.33	42.87	43.07	43.00	43.07	43.07	43.27	43.13
13	MH-431	42.93	42.73	43.47	42.40	42.53	42.27	43.07	43.07	42.73	42.80
14	MH-431	43.93	43.27	43.33	42.40	42.33	42.93	42.47	43.07	43.27	43.53
15	WH-416	43.60	43.07	43.00	43.00	43.07	42.93	43.07	43.47	43.73	43.53
16	WH-416	43.67	43.07	42.53	42.87	42.87	42.73	42.53	42.87	42.87	43.07
17	LM-407	42.87	42.93	43.27	42.53	43.20	42.73	42.67	43.07	43.47	43.27
18	LM-407	43.27	43.00	42.80	42.33	43.20	42.93	42.33	42.93	43.67	42.93
19	BUD-425	43.67	43.73	43.27	43.27	42.93	42.93	43.47	43.33	43.33	43.37
20	BUD-425	43.53	43.00	43.20	42.93	42.80	42.73	43.07	42.93	43.13	43.13

CSI-T STATS

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
Between subjects	19	12.28	.65	4.8	.0001
Within subjects	180	24.23	.13		
treatments	9	8.95	.99	11.13	.0001
residual	171	15.28	.09		
Total	199	36.51	.		

Reliability Estimates for- All treatments: .79 Single Treatment: .28

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
DAY 0	20	43.48	.42	.09
30 MIN	20	43.04	.37	.08
DAY 1	20	42.96	.47	.11
DAY 7	20	42.87	.38	.09
DAY 30	20	42.89	.31	.07

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
DAY 60	20	42.64	.43	.1
DAY 90	20	42.77	.38	.09
DAY 120	20	42.95	.3	.07
DAY 150	20	43.07	.39	.09
DAY 180	20	43.03	.32	.07

CSI-T STATS

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 0 vs. 30 MIN	.44	.16*	2.45*	4.69
DAY 0 vs. DAY 1	.52	.16*	3.36*	5.5
DAY 0 vs. DAY 7	.61	.16*	4.66*	6.47
DAY 0 vs. DAY 30	.59	.16*	4.34*	6.25
DAY 0 vs. DAY 60	.85	.16*	8.88*	8.94

* Significant at 90%

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 0 vs. DAY 90	.71	.16*	6.26*	7.51
DAY 0 vs. DAY 120	.53	.16*	3.5*	5.61
DAY 0 vs. DAY 150	.41	.16*	2.1*	4.34
DAY 0 vs. DAY 180	.45	.16*	2.51*	4.76
30 MIN vs. DAY 1	.08	.16	.07	.81

* Significant at 90%

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
30 MIN vs. DAY 7	.17	.16*	.35	1.78
30 MIN vs. DAY 30	.15	.16	.27	1.56
30 MIN vs. DAY 60	.4	.16*	2*	4.25
30 MIN vs. DAY 90	.27	.16*	.88	2.81
30 MIN vs. DAY 120	.09	.16	.09	.92

* Significant at 90%

CSI-T STATS

One Factor ANOVA-Repeated Measu es for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
30 MIN vs. DAY 150	-.03	.16	.01	.35
30 MIN vs. DAY 180	.01	.16	4.48E-4	.06
DAY 1 vs. DAY 7	.09	.16	.11	.97
DAY 1 vs. DAY 30	.07	.16	.06	.75
DAY 1 vs. DAY 60	.33	.16*	1.31	3.44

* Significant at 90%

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 1 vs. DAY 90	.19	.16*	.45	2
DAY 1 vs. DAY 120	.01	.16	1.37E-3	.11
DAY 1 vs. DAY 150	-.11	.16	.15	1.16
DAY 1 vs. DAY 180	-.07	.16	.06	.75
DAY 7 vs. DAY 30	-.02	.16	.01	.22

* Significant at 90%

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 7 vs. DAY 60	.23	.16*	.68	2.46
DAY 7 vs. DAY 90	.1	.16	.12	1.03
DAY 7 vs. DAY 120	-.08	.16	.08	.86
DAY 7 vs. DAY 150	-.2	.16*	5	2.13
DAY 7 vs. DAY 180	-.16	.16*	.33	1.72

* Significant at 90%

CSI-T STATS

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 30 vs. DAY 60	.25	.16*	.8	2.69
DAY 30 vs. DAY 90	.12	.16	.17	1.25
DAY 30 vs. DAY 120	-.06	.16	.05	.64
DAY 30 vs. DAY 150	-.18	.16*	.41	1.91
DAY 30 vs. DAY 180	-.14	.16	.25	1.5

* Significant at 90%

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 60 vs. DAY 90	-.14	.16	.23	1.43
DAY 60 vs. DAY 120	-.31	.16*	1.23	3.33
DAY 60 vs. DAY 150	-.43	.16*	2.35*	4.6
DAY 60 vs. DAY 180	-.4	.16*	1.95*	4.18
DAY 90 vs. DAY 120	-.18	.16*	.4	1.89

* Significant at 90%

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 90 vs. DAY 150	-.3	.16*	1.11	3.16
DAY 90 vs. DAY 180	-.26	.16*	.84	2.75
DAY 120 vs. DAY 150	-.12	.16	.18	1.27
DAY 120 vs. DAY 180	-.08	.16	.08	.86
DAY 150 vs. DAY 180	.04	.16	.02	.41

* Significant at 90%

APPENDIX J.

HYDROCURVE II LENS

WATER CONTENT STATISTICS

	SUBJECTS	DAY 0	30 MIN	DAY 1	DAY 7	DAY 30	DAY 60	DAY 90	DAY 120	DAY 150	DAY 180
1	DB-424B	55.47	54.00	53.87	53.13	52.00	52.53	52.47	51.93	51.87	51.80
2	DB-424	57.33	55.40	55.27	53.07	54.07	53.33	53.33	52.67	51.13	51.53
3	JB-408	58.47	52.53	52.90	51.47	49.87	48.93	48.73	49.87	50.87	51.73
4	JB-408	58.73	52.53	53.20	52.33	49.53	49.07	49.53	50.13	50.73	51.67
5	TC-428	57.27	53.73	54.07	52.47	51.73	49.93	51.33	51.73	51.93	51.73
6	TC-428	55.13	54.00	53.87	53.00	51.47	50.33	51.87	52.47	52.67	52.53
7	BD-406	55.00	52.67	51.87	47.27	47.27	47.40	47.53	48.07	47.53	47.27
8	BD-406	54.93	52.80	51.33	47.47	47.13	47.07	47.13	47.93	47.73	47.53
9	DF-420	57.87	55.40	54.87	52.33	52.07	49.27	52.13	51.93	51.87	51.73
10	JG-426	53.47	52.67	52.07	50.33	49.13	49.07	49.33	48.47	49.67	50.13
11	JG-426	53.60	53.00	52.33	49.47	47.93	48.20	49.07	48.73	49.13	50.87
12	JH-429	55.47	54.47	52.67	53.73	52.27	51.13	51.07	51.47	51.07	51.67
13	JH-429	55.27	54.33	53.93	52.73	52.07	51.87	51.93	51.47	51.60	51.73
14	DJ-402	58.33	53.47	53.07	52.60	52.33	51.13	54.53	52.93	52.93	52.73
15	DJ-402	58.20	53.73	53.13	52.87	52.07	50.13	53.67	52.13	53.13	53.07
16	AS-405	56.33	54.70	53.73	51.70	52.53	49.73	49.53	50.87	51.47	49.53
17	AS-405B	56.13	53.13	52.67	51.67	51.33	51.53	51.67	50.33	51.53	51.27
18	RS-422	54.47	54.13	53.13	52.53	51.67	51.73	51.67	51.53	50.67	51.53
19	RS-422	54.33	54.13	52.93	52.27	51.33	52.13	51.87	51.33	50.53	51.47
20	DW-410	55.60	53.07	51.27	50.33	48.07	48.47	47.67	47.13	49.33	49.87
21	DW-410	55.93	52.93	52.07	48.87	48.60	48.67	48.20	48.07	48.67	49.47
22	NW-414B	57.00	55.53	53.67	52.93	51.67	51.27	51.47	50.53	51.07	50.67
23	NW-414	57.87	55.13	53.27	51.60	51.87	50.67	50.67	51.53	51.66	50.47
24	TW-418B	58.33	53.13	52.67	52.33	53.07	52.13	52.07	52.47	52.27	52.33
25	TW-418	55.13	52.47	51.33	49.53	48.13	49.33	50.47	49.47	49.13	50.06

HYDROCURVE II STATS

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
Between subjects	24	426.11	17.75	3.99	.0001
Within subjects	225	1002.27	4.45		
treatments	9	814.57	90.51	104.16	.0001
residual	216	187.7	.87		
Total	249	1428.37			

Reliability Estimates for- All treatments: .75 Single Treatment: .23

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
DAY 0	25	56.23	1.6	.32
30 MIN	25	53.72	.98	.2
DAY 1	25	53.01	1.03	.21
DAY 7	25	51.52	1.77	.35
DAY 30	25	50.77	1.97	.39

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
DAY 60	25	50.2	1.66	.33
DAY 90	25	50.76	1.98	.4
DAY 120	25	50.61	1.71	.34
DAY 150	25	50.81	1.52	.3
DAY 180	25	50.98	1.44	.29

HYDROCURVE II STATS

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 0 vs. 30 MIN	2.5	.44*	10.02*	9.49
DAY 0 vs. DAY 1	3.22	.44*	16.56*	12.21
DAY 0 vs. DAY 7	4.71	.44*	35.39*	17.85
DAY 0 vs. DAY 30	5.46	.44*	47.61*	20.7
DAY 0 vs. DAY 60	6.02	.44*	58.01*	22.85

* Significant at 90%

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 0 vs. DAY 90	5.47	.44*	47.8*	20.74
DAY 0 vs. DAY 120	5.62	.44*	50.46*	21.31
DAY 0 vs. DAY 150	5.42	.44*	46.93*	20.55
DAY 0 vs. DAY 180	5.25	.44*	44.07*	19.91
30 MIN vs. DAY 1	.72	.44*	.82	2.71

* Significant at 90%

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
30 MIN vs. DAY 7	2.2	.44*	7.75*	8.35
30 MIN vs. DAY 30	2.95	.44*	13.95*	11.21
30 MIN vs. DAY 60	3.52	.44*	19.82*	13.35
30 MIN vs. DAY 90	2.97	.44*	14.06*	11.25
30 MIN vs. DAY 120	3.12	.44*	15.51*	11.82

* Significant at 90%

HYDROCURVE II STATS

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
30 MIN vs. DAY 150	2.92	.44*	13.59*	11.06
30 MIN vs. DAY 180	2.75	.44*	12.07*	10.42
DAY 1 vs. DAY 7	1.49	.44*	3.53*	5.64
DAY 1 vs. DAY 30	2.24	.44*	8.01*	8.49
DAY 1 vs. DAY 60	2.81	.44*	12.58*	10.64

* Significant at 90%

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 1 vs. DAY 90	2.25	.44*	8.09*	8.53
DAY 1 vs. DAY 120	2.4	.44*	9.21*	9.1
DAY 1 vs. DAY 150	2.2	.44*	7.74*	8.34
DAY 1 vs. DAY 180	2.03	.44*	6.6*	7.71
DAY 7 vs. DAY 30	.75	.44*	.91	2.86

* Significant at 90%

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 7 vs. DAY 60	1.32	.44*	2.78*	5
DAY 7 vs. DAY 90	.76	.44*	.93	2.9
DAY 7 vs. DAY 120	.91	.44*	1.33	3.47
DAY 7 vs. DAY 150	.71	.44*	.81	2.71
DAY 7 vs. DAY 180	.55	.44*	.48	2.07

* Significant at 90%

HYDROCURVE II STATS

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 30 vs. DAY 60	.57	.44*	.51	2.15
DAY 30 vs. DAY 90	.01	.44	1.86E-4	.04
DAY 30 vs. DAY 120	.16	.44	.04	.61
DAY 30 vs. DAY 150	-.04	.44	2.46E-3	.15
DAY 30 vs. DAY 180	-.21	.44	.07	.79

* Significant at 90%

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 60 vs. DAY 90	-.56	.44*	.49	2.11
DAY 60 vs. DAY 120	-.41	.44	.26	1.54
DAY 60 vs. DAY 150	-.61	.44*	.59	2.3
DAY 60 vs. DAY 180	-.77	.44*	.96	2.93
DAY 90 vs. DAY 120	.15	.44	.04	.57

* Significant at 90%

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 90 vs. DAY 150	-.05	.44	4.00E-3	.19
DAY 90 vs. DAY 180	-.22	.44	.08	.83
DAY 120 vs. DAY 150	-.2	.44	.06	.76
DAY 120 vs. DAY 180	-.37	.44	.22	1.4
DAY 150 vs. DAY 180	-.17	.44	.05	.64

APPENDIX K.

PERMAFLEX LENS

WATER CONTENT STATISTICS

	DAY 0	30 MIN	DAY 1	DAY 7	DAY 30	DAY 60	DAY 90	DAY 120	DAY 150	DAY 180	SUBJECTS
1	72.87	68.80	68.87	68.80	68.80	68.67	69.13	69.07	69.13	69.00	AC-427
2	72.67	69.87	69.73	69.60	69.47	69.53	69.47	69.60	69.53	69.60	AC-427B
3	73.67	69.53	69.50	69.07	69.20	69.13	68.20	69.07	69.07	68.93	MAH-415
4	73.33	71.07	69.93	69.93	70.00	69.93	69.87	69.93	70.00	70.00	MAH-415B
5	73.67	69.87	69.73	69.13	69.60	69.53	69.67	69.53	69.40	69.40	AL-421
6	73.93	70.53	70.13	70.27	70.13	70.13	70.93	70.93	71.00	71.00	AL-421
7	73.73	70.47	70.27	70.13	69.93	70.07	69.93	70.13	70.00	70.07	NO-430B
8	73.07	69.73	69.87	69.80	69.93	69.67	69.53	69.93	69.93	69.93	NO-430B
9	71.23	67.80	68.60	67.93	68.40	68.13	68.33	68.20	68.13	68.20	AT-417
10	72.00	67.93	68.27	68.00	68.00	68.07	68.13	68.07	67.93	68.07	AT-417
11	73.40	71.30	69.70	70.13	68.87	68.93	69.73	69.67	69.53	69.67	CW-411
12	73.80	70.70	70.90	70.93	70.53	70.67	70.47	70.47	70.93	70.93	CW-411
13	71.93	68.53	68.73	68.13	68.13	67.93	67.80	68.07	67.87	68.13	SL-431
14	71.47	68.13	68.33	68.00	68.00	67.87	67.93	68.07	67.87	68.27	SL-431

PERMAFLEX STATS

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P value:
Between subjects	13	110.33	8.49	6.11	.0001
Within subjects	126	174.99	1.39		
treatments	9	163.92	18.21	192.42	.0001
residual	117	11.07	.09		
Total	139	285.33			

Reliability Estimates for- All treatments: .84 Single Treatment: .34

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
DAY 0	14	72.91	.91	.24
30 MIN	14	69.59	1.18	.31
DAY 1	14	69.47	.79	.21
DAY 7	14	69.28	.99	.26
DAY 30	14	69.21	.86	.23

One Factor ANOVA-Repeated Measures for $X_1 \ldots X_{10}$

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
DAY 60	14	69.16	.92	.24
DAY 90	14	69.22	.99	.26
DAY 120	14	69.34	.95	.25
DAY 150	14	69.31	1.05	.28
DAY 180	14	69.37	.98	.26

PERMAFLEX STATS

One Factor ANOVA-Repeated Measures for $X_1 \dots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 0 vs. 30 MIN	3.32	.19*	90.69*	28.57
DAY 0 vs. DAY 1	3.44	.19*	97.44*	29.61
DAY 0 vs. DAY 7	3.64	.19*	108.71*	31.28
DAY 0 vs. DAY 30	3.7	.19*	112.41*	31.81
DAY 0 vs. DAY 60	3.75	.19*	115.6*	32.26

* Significant at 90%

One Factor ANOVA-Repeated Measures for $X_1 \dots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 0 vs. DAY 90	3.69	.19*	111.84*	31.73
DAY 0 vs. DAY 120	3.57	.19*	104.94*	30.73
DAY 0 vs. DAY 150	3.6	.19*	106.71*	30.99
DAY 0 vs. DAY 180	3.54	.19*	103.02*	30.45
30 MIN vs. DAY 1	.12	.19	.12	1.04

* Significant at 90%

One Factor ANOVA-Repeated Measures for $X_1 \dots X_{10}$

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
30 MIN vs. DAY 7	.32	.19*	.82	2.71
30 MIN vs. DAY 30	.38	.19*	1.16	3.24
30 MIN vs. DAY 60	.43	.19*	1.51	3.69
30 MIN vs. DAY 90	.37	.19*	1.11	3.16
30 MIN vs. DAY 120	.25	.19*	.52	2.16

* Significant at 90%

PERMAFLEX STATS

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
30 MIN vs. DAY 150	.28	.19*	.65	2.42
30 MIN vs. DAY 180	.22	.19*	.39	1.88
DAY 1 vs. DAY 7	.19	.19*	.31	1.66
DAY 1 vs. DAY 30	.26	.19*	.53	2.19
DAY 1 vs. DAY 60	.31	.19*	.78	2.64

* Significant at 90%

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 1 vs. DAY 90	.25	.19*	.5	2.11
DAY 1 vs. DAY 120	.13	.19	.14	1.12
DAY 1 vs. DAY 150	.16	.19	.21	1.38
DAY 1 vs. DAY 180	.1	.19	.08	.84
DAY 7 vs. DAY 30	.06	.19	.03	.53

* Significant at 90%

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 7 vs. DAY 60	.11	.19	.11	.98
DAY 7 vs. DAY 90	.05	.19	.02	.45
DAY 7 vs. DAY 120	-.06	.19	.03	.55
DAY 7 vs. DAY 150	-.03	.19	.01	.29
DAY 7 vs. DAY 180	-.1	.19	.08	.83

PERMAFLEX STATS

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 30 vs. DAY 60	.05	.19	.02	.45
DAY 30 vs. DAY 90	-.01	.19	7.09E-4	.08
DAY 30 vs. DAY 120	-.12	.19	.13	1.07
DAY 30 vs. DAY 150	-.1	.19	.07	.82
DAY 30 vs. DAY 180	-.16	.19	.2	1.36

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 60 vs. DAY 90	-.06	.19	.03	.53
DAY 60 vs. DAY 120	-.18	.19	.26	1.52
DAY 60 vs. DAY 150	-.15	.19	.18	1.27
DAY 60 vs. DAY 180	-.21	.19*	.36	1.81
DAY 90 vs. DAY 120	-.12	.19	.11	1

* Significant at 90%

One Factor ANOVA-Repeated Measures for X_1 ... X_{10}

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
DAY 90 vs. DAY 150	-.09	.19	.06	.74
DAY 90 vs. DAY 180	-.15	.19	.18	1.28
DAY 120 vs. DAY 150	.03	.19	.01	.26
DAY 120 vs. DAY 180	-.03	.19	.01	.28
DAY 150 vs. DAY 180	-.06	.19	.03	.54

END

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